

6TH ALL-INDUSTRY SHOW TO BE BIGGEST

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 OCT 17 1949

Over 200 Firms Will Exhibit at Atlantic City

Show To Mark Debut of
Many New Refrigeration,
Air Conditioning Items

WASHINGTON, D. C.—The 6th All-Industry Refrigeration & Air Conditioning Exposition, biggest in the Show's history and promising to house the largest exhibition of refrigeration and air conditioning products ever to be shown anywhere, will open Nov. 14 in the Atlantic City Auditorium, Atlantic City, N. J., and will run for five days through Friday, Nov. 18.

As of the time this issue goes to press, 206 manufacturers had contracted to take space in the Exposition, according to advices received from Refrigeration Equipment Manufacturers Association, sponsor of the Show.

Preview information on what will be exhibited (which will be found spotted throughout this issue) reveals that there will be

Exhibit Hours

Monday, Nov. 14.....1 p.m. to 9 p.m.
 Tuesday, Nov. 15.....10 a.m. to 6 p.m.
 Wednesday, Nov. 16..1 p.m. to 6 p.m.
 Thursday, Nov. 17...10 a.m. to 6 p.m.
 Friday, Nov. 18.....10 a.m. to 4 p.m.

(First day attendance limited to service engineers, dealers, and contractors.)

many new and redesigned products which will make their bow at the All-Industry Show.

The All-Industry Refrigeration and Air Conditioning Exposition is open to anyone who is active in the refrigeration and air conditioning industry, and who can identify himself as such at the registration desk, which will be at the entrance to the Atlantic City Auditorium. There is no admission charge.

There will be no problem in obtaining hotel accommodations in Atlantic City, with its numerous fine hotels, but those who have not yet made reservations are urged to do so quickly if they want the choicer
 (Concluded on Page 4, Column 4)

Savage To Sell Cabinets Through Distributors

UTICA, N. Y.—The refrigeration division of Savage Arms Corp. here has announced that it is setting up a nationwide organization of distributors to handle its line of low temperature merchandising cabinets.

The line consists of two cabinets of 9-cu. ft. and 18.7-cu. ft. capacity. Both units feature superstructures containing three-dimensional photographs.

The Savage line was formerly sold direct to a limited market, principally ice cream manufacturers, the manufacturer stated. They are now being produced in greater numbers for wider distribution.

Coolerator Distributors See Line Oct. 24-25

DULUTH, Minn.—"First with the latest for less." That is the theme of the second annual conclave of Coolerator distributors scheduled to be held Oct. 24 and 25 at the Edgewater Beach hotel in Chicago.

William A. MacDonough, manager of advertising and sales promotion for the Coolerator Co., recently revealed that the firm will show its
 (Concluded on Page 4, Column 5)

ISSUED EVERY MONDAY AT 450 W. FORT ST., DETROIT 26, MICHIGAN. ESTABLISHED 1926.



AIR CONDITIONING & REFRIGERATION News

THE NEWSPAPER OF THE INDUSTRY

Vol. 58, No. 7

October 17, 1949

Serial No. 1074

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879.
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INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
 College Stories
 Quotable Quotes
 Gag of the Week
 They'll Do It Every Time
 Tut, Tut, Westinghouse
 Born Salesmen Are
 'Out of This World'
 Let's Look at the Record
 The Great Fuel Crisis

Story of the Week

All investors get a raw deal in these times; and so it's no wonder that the young man who had inherited a small estate came to his well-off uncle for advice.

"Tell me, please sir," begged the young man, "how can I double this money I've inherited?"

His uncle, who had stashed away his own small fortune before the Era of High Taxes, twinkled:

"Draw that money out of the bank in large bills, fold them in the middle, and then put them back again."

College Stories

Parents of students in our Institutions of Higher Learning should appreciate these sequential anecdotes.

First telegram the Browns received from their son, a freshman at college, read as follows:

"Really got a feather in my cap—being rushed for fraternity membership. Will need more money."

A few weeks thereafter they received a second wire:

"Another feather in my cap—am on important committee. Will need more money for incidentals."

Still later came a third Western Union message:

"Additional feather in my cap—appointed chairman of class dance. Will need extra check for clothes, etc."

No further word was heard until after mid-semester exams. Then the following wire was received:

"Flunked out; please ask Dad to send money so I can come home."

Dad wired back:

"Stick all those feathers and fly home."

At Yale it's compulsory for all students to attend "chapel" periodically. Once upon a time the "chapel" speaker held forth for more than two hours—and emptied the auditorium of all but one bored listener.

The speaker had chosen for his theme, "The Meaning of Yale"—which he spelled out letter by letter. "Y" was for Youth. "A" was for Ambition. "L" was for Labor, and "E" was for Effort. Each capital letter in the word "Yale" was the excuse for at least a half-hour's discourse.

When the tiresome speaker finished at long last, found just one auditor left, and saw that this forlorn fellow was praying, he was both miffed and "touched." He demounted from the rostrum, walked down the center aisle of the chapel, and tapped the prayerful student on the head.

Son," he said, "why are you praying?"

The lad arose with a sigh, and retorted:

"I was thanking the Almighty that I hadn't enrolled at the Massachusetts Institute of Technology."

Quotable Quotes

"Union members have to keep abreast of the decisions of the NLRB, such as the following ruling:

"Our dissenting colleagues apparently do not believe that Section 8 (B) (1) (A) would be substantially duplicated if Section (8) (6) were read into Section 8 (B) (4) (A) because temporary injunctive relief under Section 10 (1) was not available against Section 8 (B) (4) (A)
 (Concluded on Page 24, Column 1)

Law Urged To Fight 'Unfair' Co-op Tactics

CHICAGO—Joseph T. Meek, executive secretary of the Illinois Federation of Retail Associations, recently proposed that Congress pass legislation to keep the Rural Electrification Administration from lending money to cooperatives that compete with local merchants in the sales and servicing of local appliances.

Meek made his proposal after what he termed unsuccessful efforts by appliance dealers around Harrisville, Ill. to gain the cooperation of the Southeastern Illinois Electric Cooperative, which was accused of selling electrical appliances at greatly reduced prices.

Meek wrote Leslie C. Arends, Illinois Republican representative, asking him to obtain the views of Wright Patman, Texas Democrat and head of the House committee on small business, on this subject.

"These cooperatives are really drunk with their own power," Meek asserted. "The merchants are pretty sore about the government lending
 (Concluded on Page 4, Column 5)

'49 Locker Upswing Is Termed Healthy

CHICAGO—"The amazing fact that 648 new locker plants were constructed during the past 12 months," and that the percentage of lockers rented has increased to 92% from the 88% rented in 1948, were cited by John Hoppe, publisher of *Locker Management*, before the Frozen Food Locker Institute convention here as proof that the industry "certainly must be very healthy."

"The number of locker plants has grown from 10,300 in 1948 to 10,948, as of today, an increase of 648 plants, or 6 1/2%," he said. "Very few industries on the American scene are growing as fast as the frozen food locker industry."

"A year ago there were 5,400,000 lockers rented. . . . Today there are 5,800,000 lockers rented, or a net gain of 400,000 lockers during the past 12 months," Hoppe declared.

"The average locker plant in the United States has today four more locker renters than it had a year
 (Concluded on Back Page, Column 1)

Contract Negotiations Adjourned by G-E, UEW

NEW YORK CITY—Another adjournment of contract negotiations between the General Electric Co. and the United Electrical, Radio, and Machine Workers (CIO) was called last week, with the two parties to get together again later this week, it was reported here.

At a brief meeting last week, the union representatives repeated their demands for a \$500 per year increase in benefits. A company statement issued after the session declared that the union had made no changes in its position from four months ago which has already "been considered in detail."

What This Issue Is All About

A good share of the editorial content of this issue and much of the advertising is concerned with the 6th All-Industry Refrigeration and Air Conditioning Exposition.

One of the reasons why so much space is devoted to telling about the Exposition is that this issue is reaching, in addition to subscribers of the News, many others who may be interested in attending.

Another reason is that Air Conditioning & Refrigeration News sincerely believes that all who attend will be highly repaid.

Penn Switch Sets Up Service Network

GOSHEN, Ind.—The establishment of a network of authorized service stations in all principal cities to provide prompt, efficient servicing of Penn automatic controls has been announced by R. H. Luscombe, general sales manager of the Penn Electric Switch Co. here.

All authorized service stations have
 (Concluded on Page 4, Column 3)

Industry To Keep Producing Until Steel Is Depleted

DETROIT—With some indications pointing to the possibility of a long steel strike—with neither side giving in because of the "principles" involved—the refrigeration, air conditioning and major appliance industries are doing the only thing they can do—continuing to produce until their supply of steel runs out.

Most of the producers reported, shortly after the strike took effect, that they had steel enough to go on producing for from 30 to 60 days. Some plants will no doubt be cutting off production sooner than that; Thor Corp., producer of washers, may close its Chicago plant down next week.

There were no more official announcements concerning the placing of products on allocation, such as Westinghouse has done with all major appliances, but there may be some behind-the-scenes refusals by manufacturers to accept future orders from dealers.

There has been a terrific step-up in the demand for sheet aluminum since the steel strike took effect, but not
 (Concluded on Page 4, Column 4)

Why You Should Attend The All-Industry Show

What is the All-Industry Refrigeration and Air Conditioning Exposition? Why is it held and why should you—a dealer, serviceman, engineer, refrigeration supply wholesaler, or manufacturing executive take a week off and travel many miles to see it?

Those who sponsor the Show and exhibit at it do so because they feel that the Show performs a service to their customers, by enabling them to see the year's new lines of products in one place, under favorable conditions, and in advance of the selling season.

To the man in the field or factory who makes use of the items exhibited at the All-Industry Exposition the Show offers the following benefits:

1. It affords him an opportunity to inspect probably all of the products he will buy to use or resell in the course of the year, to compare them, and to discuss them with the men who are responsible for their design and development.
2. Opportunity is afforded the dealer, contractor, or engineer to check new or different products with which he can expand his business.
3. The individual attending the Exposition can compare notes with men from all parts of the country whose business or line of work is similar to his.
4. He can acquire much valuable knowledge from the meetings that are held in conjunction with the Exposition, and from the educational material that is presented at many of the booths.
5. He will have a good time, be royally treated—in fact, in reality enjoy a vacation that is also time spent in helping him to do a better and more profitable job.

And as one industry executive puts it, "the coming 6th All-Industry Show will be the first true post-war exhibit of our industry. We all referred to the last Show as such, but actually the products shown were the results of hurried efforts to make products available as quickly as possible after the war. In the interim period since the Cleveland Show we have all had the opportunity to crystallize the results of our development and research thinking, to the end result of now being able to offer products which will incorporate the thinking of many years when consumer production was impossible."

Last but not least, the All-Industry Exposition is a promoter of good fellowship in an industry. When you meet personally the fellow with whom you do business, the chances are that you can learn something and that you will understand each other's problems better.

Reasons for Dropping 'Territory Protection' Outlined In Frigidaire Distributor's Letter

DETROIT—No further information has been released on the terms of the revised Frigidaire dealer contracts, which as written after Sept. 26 will no longer include the usual territory protection clause.

It is understood, however, that territory security clauses are in force in existing contracts, until such time as the new contracts are written.

As explained in the page 1 story in the Sept. 26 issue of the NEWS, the territory security clauses and implementing infringement clauses which have been part of previous selling agreements were dropped "in light of legal trends under the anti-trust laws," as General Motors Corp. officials described the situation.

A letter from a Frigidaire distributor to dealers outlines the reasons: "In the past few years it has been necessary to restudy the clauses of selling agreements because of the very definite trend and extension of legal doctrines under our anti-trust laws.

"Recently the United States Supreme Court issued an opinion holding an exclusive dealing clause in the dealer's contract to be illegal under the anti-trust laws. Although the decision represents a majority of only one with four judges dis-

senting, it is now the law of the land. The split decision emphasizes the uncertainty of the law.

"In another case instituted by the Government, a manufacturer consented to entry of a judgement restraining it from incorporation in any contract and enforcing any clause excluding its dealers from any designated territory. While this judgement does not have the effect of one which is entered after the trial of the issues of fact and law and is a lower court decision not subject to appeal, we are advised that this judgment, as well as the decision of the Supreme Court referred to above, indicates a climate in which territory restriction clauses may very well be classified under the anti-trust law.

"We do not have a definite opinion as to the legality or illegality of such clauses and this is understandable when judges have divided so closely.

"We are advised, however, that the Government will undoubtedly test the legality of such clauses in the courts. If territorial restrictions are imposed in contracts such as selling agreements, there are many reasons why the General Motors Corp. and we as distributors of Frigidaire products, should not assume the risk attending a doubtful legal position in our relations with dealers and in distributing Frigidaire products.

"If there are desirable business results to be obtained, they must be accomplished by clearly legal methods. Accordingly, new selling agreements will be issued in the near future from which the territory security clauses as well as implementing clauses will be omitted."

Dealer 'Bombing'

Airplanes Drop Leaflets To Draw Demonstration Crowd

OGDEN, Utah—Distributing 15,000 invitations to attend a special home freezer demonstration by means of light airplanes, which covered the city, resulted in a record home freezer volume recently here, when a group of appliance dealers staged a special home freezer demonstration and school.

Fifteen appliance dealers cooperated in the program, which was presented on the stage of a local theater, with Dr. E. O. Greaves, home economist for the Utah State Agricultural college and dealer Delbert Foulger and Collin W. Lower in charge.

With the theater filled to capacity, the economist and the dealer demonstrated construction and use of home freezers, wrapping paper, gave demonstrations of the length of time which perishable foods may be preserved, and handy hints on home freezer use. Each dealer displayed his franchised lines of home freezers in the lobby of the theater, and participated in a full-page newspaper advertisement inviting Ogden housewives to visit the event.

So much interest was cooked up by the show, according to Lower, that a local newspaper cooperated by running a special supplementary section on home freezers and their use, which was read by more than 20,000 people.

Unique Work-Shelf Arrangement Helps Shop Handle Reconditioning Quickly

WAUWATOSA, Wis.—Improved arrangement of his appliance service shop and simplification of operating procedure has boosted production 50% for the C. W. Schneck Co. here.

C. W. Schneck, head of the firm, claims his organization operates one of the busiest reconditioning shops in Wisconsin. Located in this Milwaukee suburb, the company services several department stores, and a long list of appliance dealers and distributors.

Expanding business prompted Schneck to reorganize his setup earlier this year when he built a new building right next to the one he formerly occupied and spread his organization over both structures. Both buildings now contain a dozen fully-equipped individual repair shops, with a service and sales counter at the front of the main building.

Each workshop, operated by a single mechanic, consists of a worktable, a small independent stockroom, and all necessary machines, equipment, and storage drawers. Each workman has a grinder for sharpening his tools, an arc welder, silver soldering equipment, an arbor press, a drill press, vise, polishing equipment, hacksaw, hand drill, and all test meters for each kind of repair job.

Located to the right of the workbench is a shelving fixture which contains six tiers of shelves, each representing a single day in the week.

The size of the shelf is dictated by the type of work done in the shop. If the mechanic is repairing compressors, for example, the shelf will hold seven of them, or just about his total productive capacity for the week.

Thus, as work comes in, the shelf for the following day is filled up first, and those for the succeeding five days of the week filled up next.

Starting each week, the mechanic

repairs the items which appear on the shelf which corresponds with Monday, and sees to it that all are repaired and put back on the shelf before going on to the Tuesday shelf.

At the end of the work day, a wheeled truck is used to unload the shelf for the corresponding day, and the repaired appliances are moved to the front for return to customers or redistribution to the dealers or department stores concerned.

"This idea has shown many advantages," Schneck indicated. "First, it is no longer necessary to make out complex work record sheets, which use the serial number of the appliance, date received, the time, the customer, etc.

"Instead of this laborious work, a simple tag, with a ledger number is entered, and the fact that the appliance is placed on a specific shelf indicates that it is to be repaired on that day, for fast service.

"It is no longer necessary to maintain files, tracers, etc., and most important, nothing gets lost."

All of the mechanics like the system, it was reported. While once in a while, too much work accumulates on a shelf representing a single day to be turned out in an 8-hour working period, the mechanic usually "makes it up" by working overtime, or putting more efficiency in production.

All of the appliances when repaired, wind up in alphabetized bins, behind the service counter, where locating them is a matter of seconds.

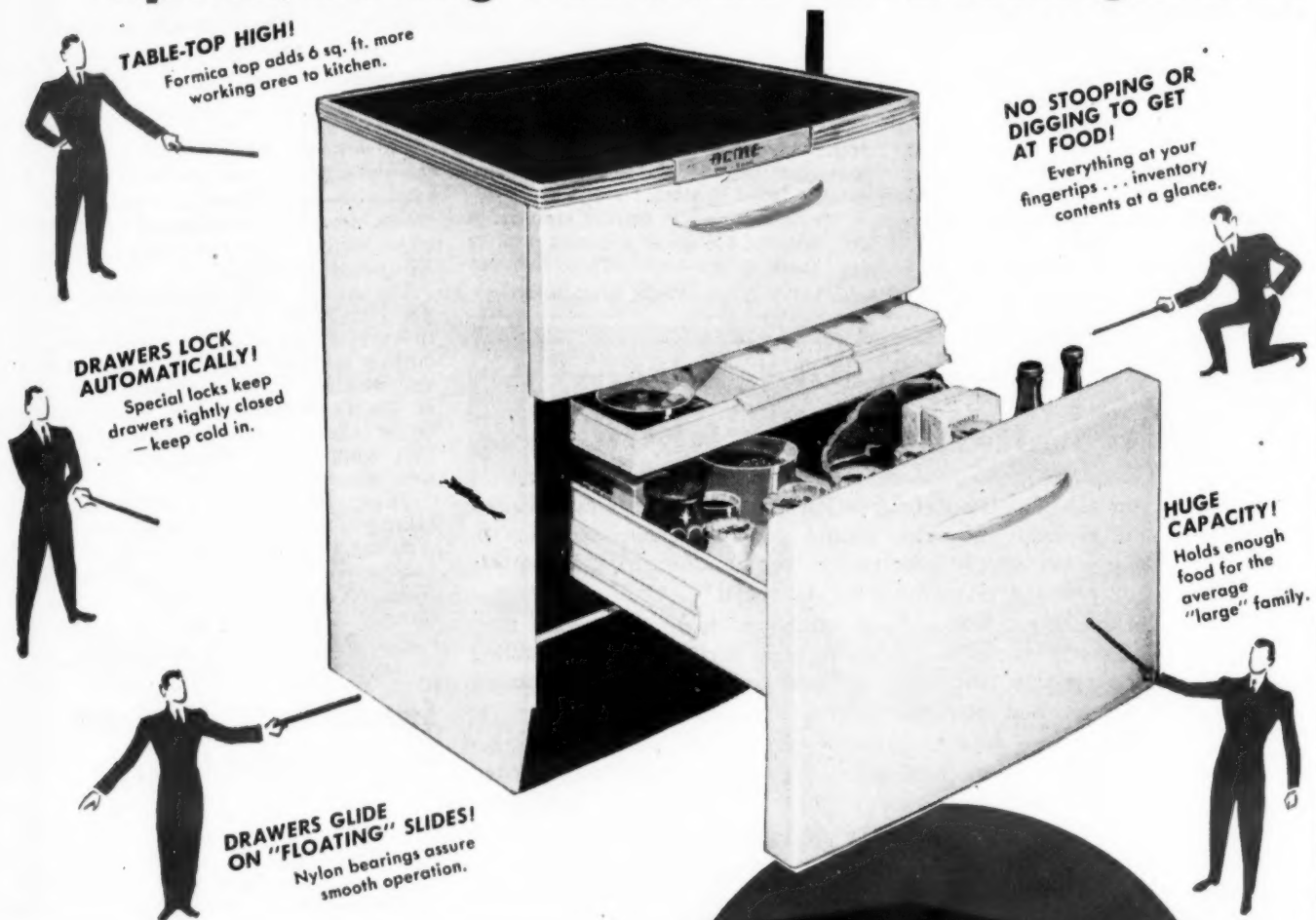
The Schneck company has installed bright, efficient overhead fluorescent lighting, a skylight, and utilizes big, daily-cleaned windows to provide plenty of illumination.

With these advantages, individual tools and part rooms for each man, production has jumped by more than 50% with no increase in the company payroll.

Yes! Something New Under the Sun!

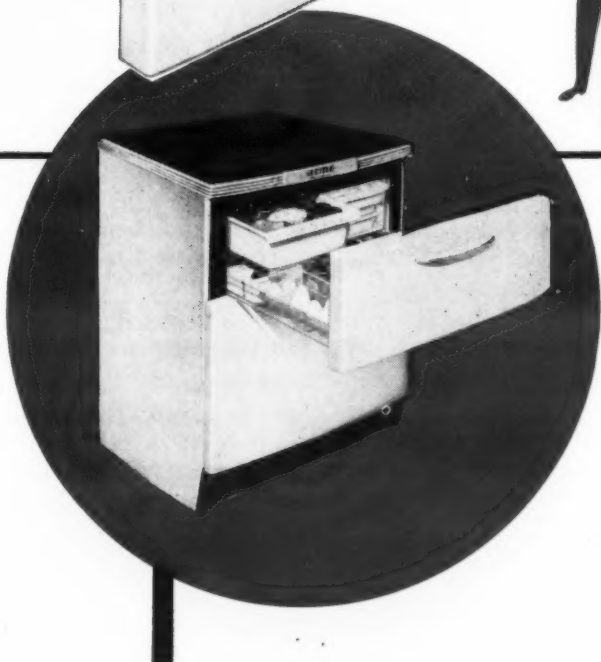
The Acme TRU-ZONE

Space-Saving DRAWER TYPE Refrigerator



BIG PROFITS FOR DEALERS

Here's a new idea in a space-saving refrigerator that has all the selling features which add up to real volume for you. It's the refrigerator that an independent survey proved was genuinely desired by the American housewife. Check the advantages, point by point... and at the value-packed low price, you can see why dealers are acclaiming the Acme TRU-ZONE as the finest refrigerator deal today. Write, wire or phone for complete details as to how you can be the first to offer the TRU-ZONE in your area.



ACME-NATIONAL Refrigeration Co., Inc.

THE PIONEER IN SPACE-SAVING REFRIGERATION

634 Dean Street • Brooklyn 17, N. Y.

VISIT OUR BOOTHS NOS. 625-627 AT THE ALL-INDUSTRY SHOW, ATLANTIC CITY

Foreign Concessions on Tariffs Cover Appliances

WASHINGTON, D. C.—Electrical appliances are among major commodity groups on which 10 countries have made tariff concessions to the United States, according to the State Department.

However, the concessions were not expected to be of much benefit to American manufacturers for some time since nearly all the 10 countries have strict import quota systems. Adjustments in tariff rates will not result in any change in the quotas.

The countries involved are Denmark, Dominican Republic, Finland, Greece, Haiti, Italy, Liberia, Nicaragua, Sweden, and Uruguay. During talks with these countries, the U. S. also agreed to tariff concessions on a wide variety of goods.

Competition Seen Keener If Supermarkets, Gas Stations Sell Appliances

NEW YORK CITY—Appliance retailers are accustomed to finding their competition popping up in such places as gasoline stations, supermarkets, and automobile supplies stores.

If some among them aren't, they had better start getting used to it for it is coming in big bunches. That is if recommendations by some trade associations that their members diversify their merchandise lines are carried out.

The Super Market Institute is one that is strongly urging market operators to follow the trend to handling items other than food in their stores—even including major appliances.

One official is reported as saying: "If you can get the traffic in your store, you can't afford to waste it. One outstanding achievement which supermarkets have attained is a successful self-service operation of merchandise that ranges right up to major appliances."

Though the institute official admitted that adding new lines increased the problems of the operator and that department store "know-how" was needed to operate non-food departments, he said that a recent nationwide survey indicated that about 75% of supermarkets stocking non-food lines have been successful with them.

Gem Refrigerator Co. Set To Move Into Philadelphia Plant

PHILADELPHIA—A new, one-story plant is now being erected here for Gem Refrigerator Co.

The building will have a showroom, offices, used equipment display room, and manufacturing plant. The plant will be equipped with the newest type of fabrication and production machinery, including spray equipment, metal working machinery, presses, and a complete wood-working plant.

The plant will be located at 165 W. Wyoming Ave., Philadelphia 40, and is expected to be ready for complete use about Nov. 1.

Independent Dealer Sales for August Increase 5% over July

WASHINGTON, D. C.—August sales of independent household appliance dealers were up 2% from a year ago and 5% from July.

However, sales for the first eight months lagged 7% behind the corresponding 1948 period.

Reports from independent retailers of all types throughout the nation revealed that both sales in August and in the first eight months were down 2% from the like 1948 periods. August sales rose 10% from July.

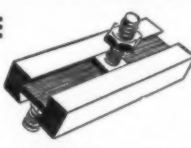
Washers Sell Better In August

CHICAGO—Factory sales of standard size household washers during August jumped 61% over July though they failed by 10.6% of equalling the 1948 volume for that month, the American Home Laundry Manufacturers Association noted recently.

The washer sales volume was better than any month since last October, the association revealed.

MOTOR-BASE ADAPTERS

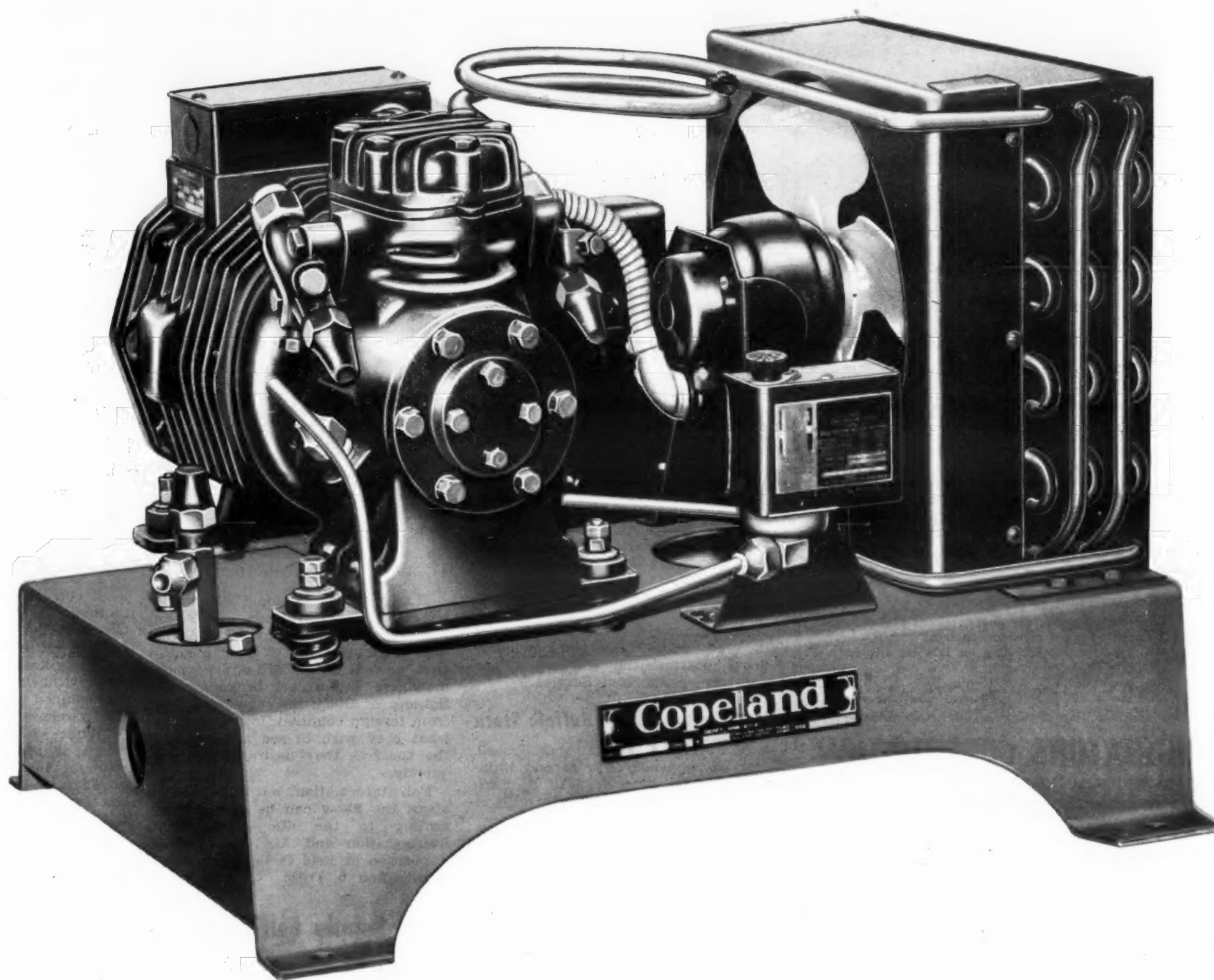
Your next job may require a motor adapter set. Better be prepared. Carry extra sets in your service car.



1/8 to 1/2 hp.—101-D
1/2 to 1 hp.—102-C
1 to 3 hp.—103-C

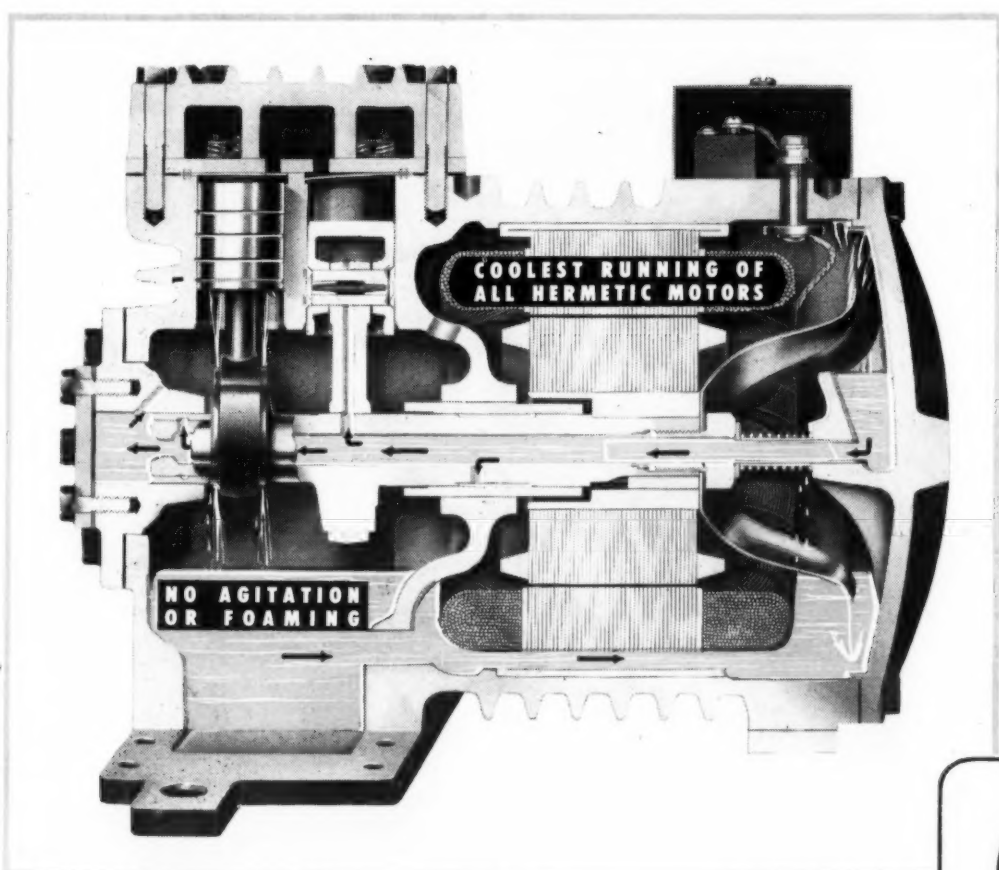
SERVICEMEN SEE YOUR JOBBER

Motor Adapter Corporation
4730 JOY ROAD
DETROIT 4, MICHIGAN



Copelametic Remote Units Now Up To 7½ H. P.

Broaden Your Market!



Follow the arrows and see how oil reaches all bearing surfaces by forced-feed lubrication. One-piece compressor and motor housing maintains perfect alignment for bearings and cylinders.

This wider range of horsepower now available in Copelametic means more prospects, more salespower for you. Copelametic combines the best features of all types of condensing units. Belts, seals and manual oiling are eliminated. Copelametic motor-compressors are easily accessible.

Manufacturers and engineers find Copeland's compact, sturdy design meets the requirements of modern refrigeration and air conditioning equipment. Jobbers and dealers find their selling job made easier by Copeland's national advertising and reputation for dependability. Satisfied users testify to Copeland's smooth, quiet, economical operation.

Display and sell the new, larger Copelametics.

SEE OUR COMPLETE LINE AT THE ALL-INDUSTRY SHOW

Copeland

DEPENDABLE *Electric* REFRIGERATION

Manufacturers of: Refrigeration Units (Open Type and Copelametic), Compressors, Refrigerators, Water Coolers.

COPELAND REFRIGERATION CORPORATION • SIDNEY, OHIO
EXPORT DEPARTMENT • 60 WALL TOWER, NEW YORK CITY

WHY PAY MORE...

when you can buy this GENERAL CASE which offers all the features of cases selling at almost double its price... Plus a firm MONEY-BACK GUARANTEE



at **\$199.00** NET
F.O.B. N. Y.

MM4: FUL VISION CASE

4' Ful Vision Case finished in glistening baked enamel with chrome trim. Triple Thermopane glass. Coils hooked up.

SPECIAL 1/3 H.P. air-cooled Chrysler Airtemp Unit \$69.00

- Convenient hinged rear door
- 3 Corrosion proof aluminum shelves
- New type fluorescent fixture for brighter display
- All parts easily replaced
- Also available in 5' & 6' lengths
- All sizes available self contained, ready for plug in.

Write for information on our complete line of Commercial Refrigeration

GENERAL REFRIGERATORS CORPORATION

678 BROADWAY, NEW YORK 12, N. Y.

UNCONDITIONAL GUARANTEE

If, after purchasing the MM4 Ful Vision Case, you find that it does not come up to your complete satisfaction, we will take it back, paying freight costs for return—and **Refund Your Money in FULL**

Penn Switch--

(Concluded from Page 1, Column 3) been carefully selected, not only for their ability to meet Penn's requirements, but also for strategic location in relation to the service requirements of the area.

Service personnel in these authorized service stations are given an intensive course of factory training... instructed and supervised by Penn's service experts.

This specialized training course is based on the design, construction, and operating characteristics of Penn controls, with special emphasis on the techniques and procedures of keeping controls operating at top efficiency.

In addition, all stations are authorized to make immediate replacements under the terms of the Penn warranty and also under the Penn flat price replacement plan.

As a part of the program, Penn engineers have devised and made available to these stations the Penn control analyzer, a panel containing all the instruments necessary for testing the electrical circuits of all Penn controls. This control analyzer takes the guess work out of servicing and helps speed the necessary adjustments, repair, or replacement.

All stations may be identified by the red, white, and black window decal bearing the wording "Penn Controls—Authorized Service."

Firm Opens Second Buffalo Store

BUFFALO—Hannon and Frosell, Inc. have opened their second Kalamazoo store here at 2719 S. Park Ave.

All-Industry Show--

(Concluded from Page 1, Column 5) accommodations in hotels closer to the Auditorium. Hotel reservations can be made through the Housing Bureau, All-Industry Exposition, 16 Central Pier, Atlantic City, N. J.

Every major association in the industry will hold some sort of meetings in Atlantic City during the week of the Show, with the Refrigeration Service Engineers Society, the Refrigeration and Air Conditioning Contractors Association, the Refrigeration Equipment Wholesalers Association, and the National Commercial Refrigerator Sales Association holding their annual conventions during the week.

Hotel headquarters for the various associations meeting during the Show are as follows:

REMA..... Hotel Traymore
Exhibitors..... Hotel Traymore
REWA..... Hotel Claridge
RSES..... Hotel Ambassador
RACCA..... Hotel Ambassador
NCRSA..... Hotel Ambassador
NEMA..... Chalfonte-Hadden Hall
ACRMA..... Chalfonte-Hadden Hall

The Rema International Headquarters Booth at the Show will be an innovation. Here a record will be kept of all visitors from foreign countries, as well as a record of all export managers and export brokers, with the idea of aiding the representatives from foreign countries in finding just what they wish to see and making the contacts they desire easily and quickly.

Full information on any details about the Show can be obtained by writing to the 6th All-Industry Refrigeration and Air Conditioning Exposition at 1346 Connecticut Ave., Washington 6, D. C.

Coolerator Meeting--

(Concluded from Page 1, Column 2) new line of refrigerators and electric ranges and unveil "a brand new idea in home freezers" at the conclave.

More than 450 Coolerator distributor personnel are expected to see Ward R. Schafer, vice president and general manager, and W. C. Conley, Jr., sales manager, proclaim the new lines.

In addition to seeing the new appliances for the first time, the distributors will learn details of the company's promotional program for 1950.

The sessions will begin at 1:30 p.m. Monday, Oct. 24, and finish up with a luncheon on Tuesday. A cocktail hour and dinner in the Marine dining room are planned for Monday evening.

New Co-op Law Urged--

(Concluded from Page 1, Column 2) their money as taxpayers to local cooperatives for the purpose of buying appliances to sell in direct competition with them, the taxpayers.

"I found ample evidence that the local cooperative was using unusual tactics to sell appliances in competition with the merchants.

"For example, several merchants said they knew of cases where power was withheld from farmers until they signed up with the Co-op for the purchase of appliances.

"While I did not get specific evidence, it seems clear to me that some of these Co-op men—not the president, who seems to be a very sincere old gentleman—were even threatening an increase in rates if the appliance angle was overlooked."

Admiral Sales for 9 Mos. Hit All Time Peak, Earnings Up

CHICAGO — Ross D. Siragusa, president of Admiral Corp., today announced that sales for the nine months ending Sept. 30 were at an all time peak amounting to \$77,078,151 as against \$42,514,509 for 1948.

Net earnings for the nine months of 1949 were \$4,631,574 as against \$2,037,786 for 1948. Earnings per share for the period were \$4.63 as against \$2.04, last year.

Sales for the third quarter of 1949 were \$23,967,745 as against \$15,128,165 for 1948. Net earnings for the third quarter of 1949 were \$1,475,884 as against \$800,489 for 1948. Earnings per share during the quarter, were \$1.48 as against \$.80 for the same period last year.

Admiral board of directors has approved 100% stock distribution to be issued to holders of record on Nov. 21, subject to approval of an increase in authorized capital stock to 2,000,000 shares by stockholders at a meeting to be held Nov. 9. It is contemplated the quarterly dividend rate of \$.20 per share will be maintained on the new shares.

Frozen Food Sales Up 22%, Beatrice Foods Co. Reports

CHICAGO—Dollar sales of frozen foods by the Beatrice Foods Co. here for the six months ended Aug. 31 were 22% higher than the same period last year, C. H. Haskell reported recently.

Steel Supply Falling--

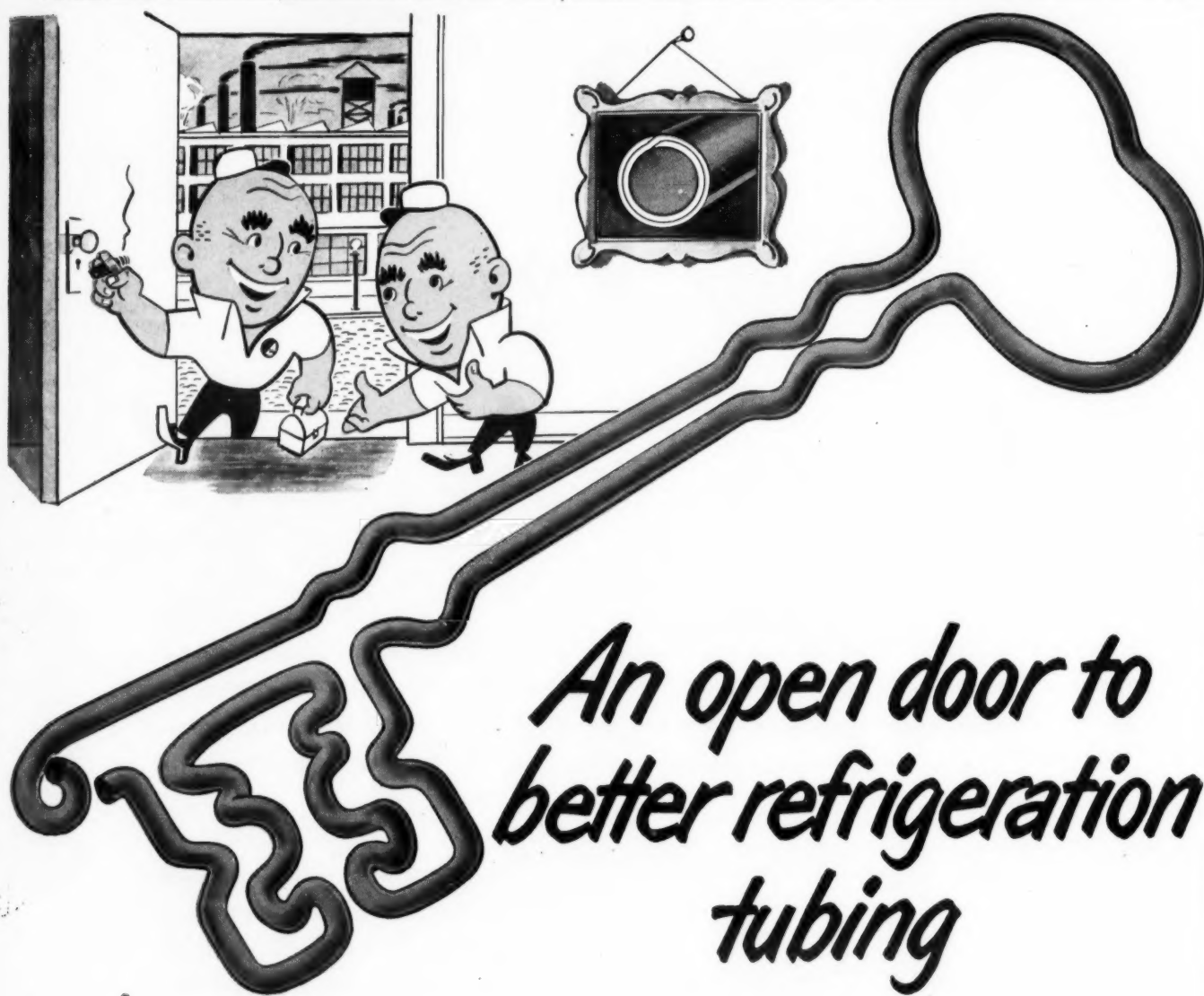
(Concluded from Page 1, Column 4) much of this is for the refrigeration or appliance industries to use as a substitute for steel.

Steel warehouse stocks were said to have been about as high as they have ever been at the start of the strike, and these supplies may stretch out the period of possible production for some manufacturers. However, many warehouses said they expected their stocks to be depleted within a week.

Dept. Store Sales Off 8% For Week Ending Sept. 24

WASHINGTON, D. C.—An 8% decline in dollar volume of department store sales for the week ending Sept. 24 as compared with the corresponding week last year was noted recently by the Federal Reserve Board. The declines ranging from 1 to 13%, were general in all Federal Reserve districts.

For the year to Sept. 24, sales were off 5% from the same period last year. Percentage declines from last year's figures for the week by districts were: Atlanta 1; Dallas 2; Kansas City 4; Chicago, St. Louis, and Minneapolis 6; Philadelphia 8; Boston and San Francisco 10; New York 11; Richmond 12; and Cleveland 13.



In ever-increasing numbers, refrigeration manufacturers are finding Bundyweld® Steel Tubing an open door to better refrigeration at lower cost.

For Bundyweld is a unique tubing. Made by a patented process, it is double-walled from a single strip, and copper-coated throughout all points of wall contact. It's extra-strong yet thinner-walled... and thinner walls mean faster-cooling!

Lightweight, easily handled, Bundyweld is extremely ductile, and can be bent to short radius turns without fear of its buckling. It's easy to fabricate... helps to

cut production time, lower production costs... and it lasts the life of the refrigerator.

Why not check this low-cost tubing for your compressor lines, connecting tubes and condenser and evaporator coils? Contact your nearby Bundy representative among those listed below, or write direct to: Bundy Tubing Company, Detroit 14, Michigan.

BUNDY TUBING

ENGINEERED TO YOUR EXPECTATIONS
REG. U. S. PAT. OFF.

WHY BUNDYWELD IS BETTER TUBING

- 1 Bundyweld Tubing, made by a patented process, is entirely different from any other tubing. It starts as a single strip of basic metal, coated with a bonding metal.
- 2 This strip is continuously rolled twice laterally into tubular form. Walls of uniform thickness and concentricity are assured by close-tolerance, cold-rolled strip.
- 3 Next, a heating process fuses bonding metal to basic metal. Cooled, the double walls have become a strong ductile tube, free from scale, held to close dimensions.
- 4 Bundyweld comes in standard sizes, up to 5" O.D., in steel (copper or tin coated), Monel or nickel. For tubing of other sizes or metals, call or write Bundy.

BUNDY TUBING DISTRIBUTORS AND REPRESENTATIVES

Cambridge 42, Mass.: Austin-Hastings Co., Inc., 226 Binney St. • Chattanooga 2, Tenn.: Peirson-Deakins Co., 823-824 Chattanooga Bank Bldg.
Chicago 32, Ill.: Lopham-Hickey Co., 3333 W. 47th Place • Elizabeth, New Jersey: A. B. Murray Co., Inc., Post Office Box 476 • Philadelphia 3, Penn.: Rutan & Co., 404 Architects Bldg. • San Francisco 10, Calif.: Pacific Metals Co., Ltd., 3100 19th St. • Seattle 4, Wash.: Eagle Metals Co., 3628 E. Marginal Way • Toronto 5, Ontario, Canada: Alloy Metal Sales, Ltd., 881 Bay St.

BUNDYWELD NICKEL AND MONEL TUBING IS SOLD BY DISTRIBUTORS OF NICKEL AND NICKEL ALLOYS IN PRINCIPAL CITIES.

BAR MITÉ

by KOLD-DRAFT

"The Foremost Name In Beverage Cooling And Dispensing Equipment."

- Designed For Under Bar Use—Stainless Steel Inside and Out.
- Stainless Steel Drain Shelf Ideal For Clean Glasses, Bar Ingredients, Or Used And Waste Drinks.
- Two Models—Holds 188—12 oz. or 245—12 oz. bottles.

BAR MITÉ MODEL 36

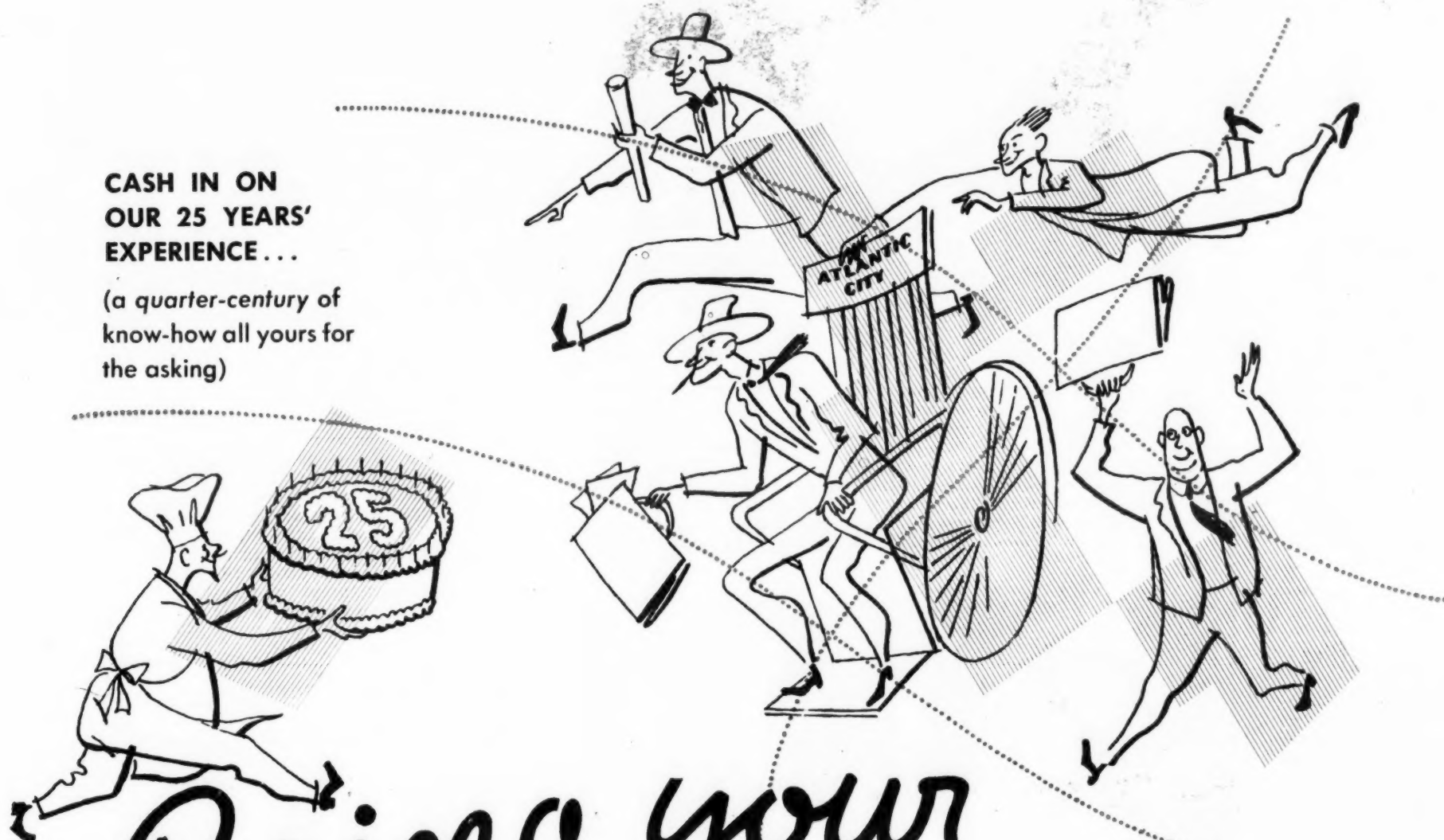
KOLD-DRAFT, World's Largest Manufacturer of Complete Electric Beer Dispensing Systems, Invites You To Write For Full Details On The KOLD-DRAFT Line.

KOLD-DRAFT Div.
UNIFLOW MANUFACTURING CO., ERIE, PA.
Distributors In Most Principal Cities

*Trademark Reg. U.S. Pat. Off.

**CASH IN ON
OUR 25 YEARS'
EXPERIENCE...**

(a quarter-century of
know-how all yours for
the asking)



**Bring your
refrigerant control
problems to booths 422-4-6**
(THE ALL-INDUSTRY SHOW, ATLANTIC CITY, NOV. 14-18)

GO INTO A HUDDLE WITH OUR ENGINEERS...
(some of the best brains in the industry)



Designers and Manufacturers
of Thermostatic Expansion
Valves; Evaporator Pressure
Regulators; Solenoid Valves;
Float Valves; Float Switches.

ALCO VALVE CO.

853 KINGSLAND AVE. • ST. LOUIS 5, MO.

3953

Producers, End Users Begin Study of New Copper Tubing Standard

WASHINGTON, D. C.—A recommended Commercial Standard for Refrigeration Service Copper Tube has been submitted to producers, distributors, and users for consideration and acceptance, according to the Commodity Standards division of the National Bureau of Standards.

The standard was developed at the request of, and in cooperation with, the Copper & Brass Research Association. It provides minimum requirements for eight standard sizes of seamless annealed copper tube manufactured for refrigeration service purposes in sizes ranging from 1/8-in. to 3/4-in. in outside diameter.

It covers temper, manufacture, chemical composition, tensile properties, workmanship and finish, dimensions, weight, and tolerances. It also includes methods of test, packing and a recommended method of identification.

A limited number of mimeographed copies of the recommended standard is available, and a copy may be obtained, as long as the supply lasts, from the Commodity Standards division, National Bureau of Standards, Washington 25, D. C.

Instalment Credit Sets Record After August Rise

WASHINGTON, D. C.—The consuming public owed \$2,462,000,000 for merchandise other than automobiles purchased on the instalment plan at the end of August, the Federal Reserve Board reported recently.

This figure represents a gain of \$63,000,000 over the end-of-July total.

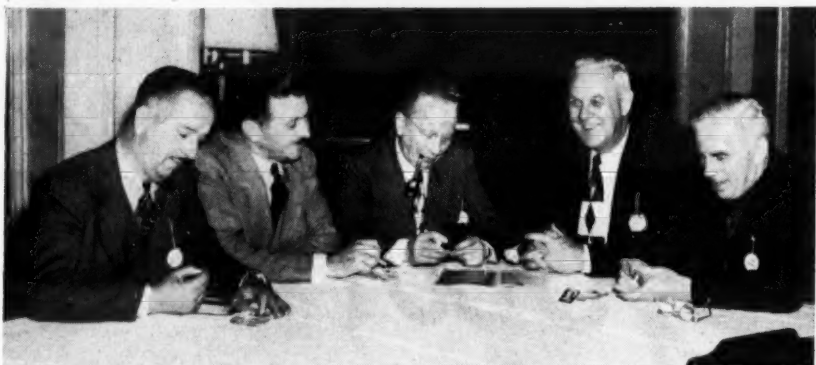
Buying on charge accounts reversed the general trend of expanding consumer credit. Charge account balances were down \$59,000,000 for the month, totaling at the end of August, \$3,064,000,000.

Total instalment credit hit a new postwar high of \$9,613,000,000, the board asserted. This was up \$282,000,000 for the month and \$1,641,000,000 over the same date last year.

2 Committees Plan for Atlantic City



The committee in charge of arrangements for the 6th All-Industry Exposition makes some final arrangements for the Show which opens Nov. 14 in Atlantic City. Standing (l. to r.) are Howard Roberts, Victor Products Corp., co-chairman, show entertainment; J. F. Dailey, Typhoon Air Conditioning Co., Inc., show committee; R. L. Sears, Lynch Corp., chairman, entertainment committee. Seated (l. to r.) are George E. Mills, Rema, Show director; K. B. Thorndike, Detroit Lubricator Co., president of Rema; H. F. Spoehrer, Sporlan Valve Co., chairman, Show committee; W. Vernon Brumbaugh, executive secretary of Rema.



This committee in charge of arrangements concerns itself with the annual meeting of the Refrigeration Service Engineers Society which will be held at the Hotel Ambassador in Atlantic City Nov. 13-16. Seated around the table (l. to r.) Bob Kearney, secretary of the Garden State Chapter (which is co-host); Jim McCue, of Boston, chairman of the entertainment committee; Charlie Harris, of Boston, international president; Whit Freeman, of Newark, general conference chairman; and Bill Tierney, of Worcester, international director.

Shell-and-Tube System Will Pre-Cool Syrup at Dr. Pepper Bottling Plant

ST. LOUIS—Refrigeration equipment designed to cool high concentrate sugar syrup used in making popular carbonated beverages from room temperature to 30° F. has been installed in the bottling plant of Dr. Pepper Bottling Co. here.

In operating practice, base syrups for Dr. Pepper and Barq's popular line of flavors, travel approximately 15 ft. from tanks on the second floor of the plant to the mixing and filling machines in the first-floor bottling room.

Prior to installation of the refrigeration equipment, foaming up and bubbling of the syrup resulted in improper mixes, and "turgid" bottling.

The solution has proven to be a shell-and-tube cooler, extending from the ceiling to a point just above the mixing machine, through which all of the syrup travels, before use.

The syrup is cooled by means of an ammonia water mixture provided by a refrigerating compressor which is already part of the bottling line. It circulates chilled refrigerant around the pipe carrying the syrup through all but a few inches of its travel. As a result, the syrup enters the bottling line chilled to proper viscosity and temperature and is ready to mix far more efficiently.

Owen Nelson, Temprite Sales Executive, Dies

DETROIT—Owen Nelson, western sales manager for Temprite Products Corp. here, and veteran of 25 years in engineering and sales work in the refrigeration industry, died Oct. 9 while en route to Providence hospital in Detroit. He was 49.

He began his business career in the automotive field with Continental Motors and Motor Products Corp., but joined the old Copeland organization in the middle 1920's on the engineering staff, later becoming chief designer. In 1931 he went with Riley Engineering Co. and had a part in designing oil separators and other accessories for refrigeration systems. Later he was with American Injector Co. for a number of years.

He joined Temprite in 1939 and had been western sales manager for some years before his death. He was well known in boating circles, which was his hobby. His wife and two children survive him.

American Trust, 2 Charlotte Branches Install Glycol Vapor Units

CHARLOTTE, N. C.—Ross & Witmer, Inc., of this city, air conditioning distributor and installation engineer, has just installed glycol vapor machines in the offices and banking rooms of the American Trust Co. on South Tryon St. and in the bank's two city branches on East Morehead St. and in the law building, according to C. N. Witmer, general manager of Ross & Witmer.

Moves to Victor Products



HOWARD R. ROBERTS

Roberts Is Sales Mgr. of Victor Products Division

HAGERSTOWN, Md.—Appointment of Howard R. Roberts as sales manager of Victor's national-users division, has just been announced by J. K. Noel, vice president of Victor Products Corp. here. Roberts will assume his new duties this month.

Roberts comes to Victor from Whiting Corp., where he has directed activities of the refrigeration division since 1945, when Whiting entered the refrigeration field with a line of food freezers.

Prior to his connection with Whiting, Roberts served for many years as chief sales executive in the Deep-freeze Div. of Motor Products Corp.

Roberts is a director of the Refrigeration Equipment Manufacturers Association. Currently he is chairman of the Food Freezer Section of that association.

Hearing Set on Sale of Solar Mfg. to Sprague

UNION CITY, N. J.—A hearing on a plan for the sale of the assets of the Solar Mfg. Co. here will be held on Nov. 15 before Judge Guy L. Fake of Federal Court in Newark, is was reported recently.

The plan, submitted to Judge Fake by the reorganizational trustees, John J. McGill and George Furst, calls for sale of the firm to the Sprague Electric Co. of North Adams, Mass. for \$525,000, or to any other high bidder.

The United Electrical Workers local 427 previously had contested and won a reversal of the court's decision to sell Solar to Sprague on the grounds that about 500 employees would lose their jobs because of it.

GECC Names Louisville Agent

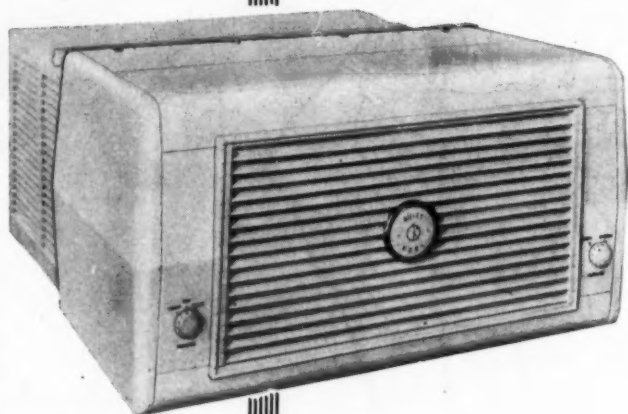
LOUISVILLE, Ky.—Paul W. Connell has been appointed local representative in Evansville, Ind. for the General Electric Credit Corp., according to D. O. Thomas, southeastern district manager.

Connell, formerly an adjuster in Louisville, will work under that office.

You're Missing Plenty if You Don't See QUIET-HEET'S EXHIBIT

Booth No. 706

at the All-Industry Exposition!



Model G-7
"QUIET KOOL"
3/4 HP Room
Air Conditioner

QUIET-HEET PRODUCTS...

Incorporate top
quality with top
performance at
the lowest prices!

NEW! 3/4 HP "QUIET KOOL" ROOM AIR CONDITIONER

- Exceptionally Quiet
- Hermetically Sealed
- Smartly Styled

NEW! 1/2 HP "QUIET KOOL" ROOM AIR CONDITIONER

- Increased Capacity
- Quieter Than Ever
- Proven Performance

NEW! 20 inch "QUIET BREEZE" WINDOW FAN

- An Economical Room Cooler
- Three-speed Control Assures Quiet Operation

NEW! "QUIET-DRI" DEHUMIDIFIER

- Full 1/2 HP Capacity
- 3-Gallon Per Day Water Removal
- Unlimited Market Possibilities

ENGINEERED
AND
MANUFACTURED
BY THE
WORLD'S
LARGEST
MANUFACTURER
OF
OIL BURNERS

Send for Complete
Details & Literature

QUIET-HEET MFG. CORP.

135 New Jersey Railroad Ave.

Newark 5, New Jersey

PREMIER SHOWING OF A NEW DEVELOPMENT IN MODERN BEER DISPENSING EQUIPMENT...

On Display At
Booths No. 347 - 349 - 351
Atlantic City Exposition

It's New - It's Practical - It's Tops

Another First From:

LA CROSSE COOLER CO.

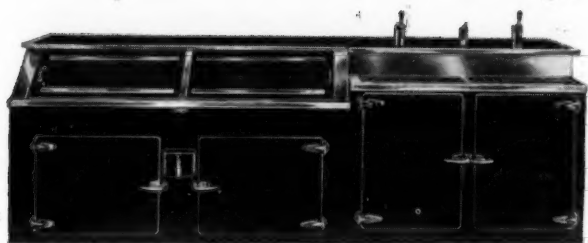
2809-17 Losey Blvd., So.
LA CROSSE, WISCONSIN

NO MATTER HOW YOU LOOK AT IT

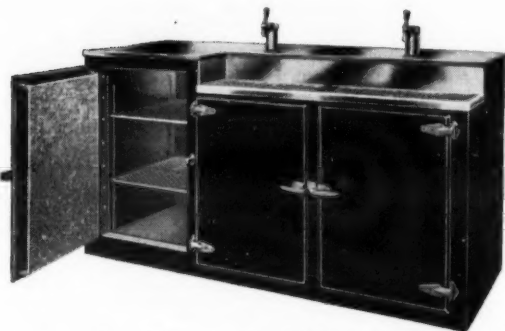


LA CROSSE

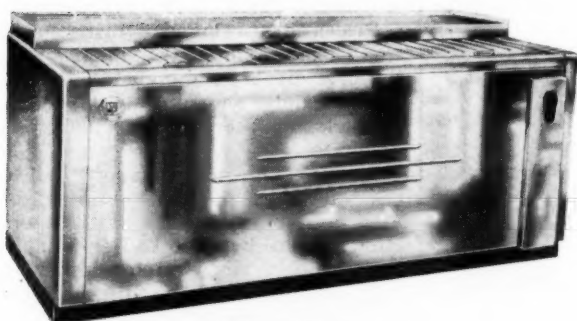
STANDS OUT!!



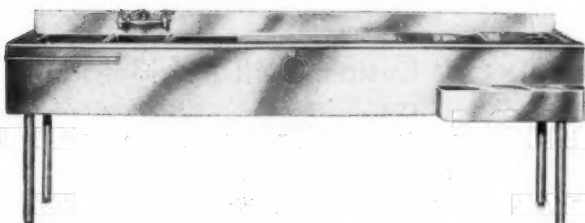
Club Special



La Crosse Combination



Blue Bird



Supreme Drainboard

Paramount
Direct Draw

ENGINEERING skill and guaranteed workmanship assures dependable performance in every model from La Crosse.

CONSTRUCTED to assure maximum, long lasting, trouble free service for complete customer satisfaction.

OLD in experience—modern applications of 15 years of experience in building quality equipment.

NEW in design—sound in research—with a complete understanding of refrigeration problems.

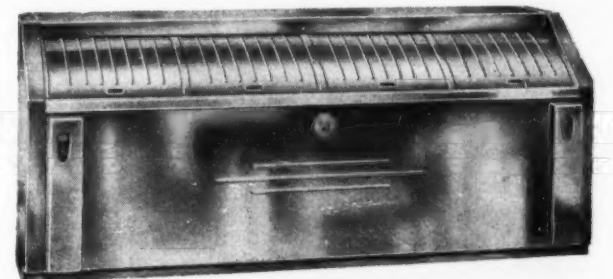
ONLY La Crosse has this Complete Line (partially illustrated) of Time Tested, Test Proven Equipment.

MATERIALS of quality used throughout the entire line. Quality materials help to make these quality products.

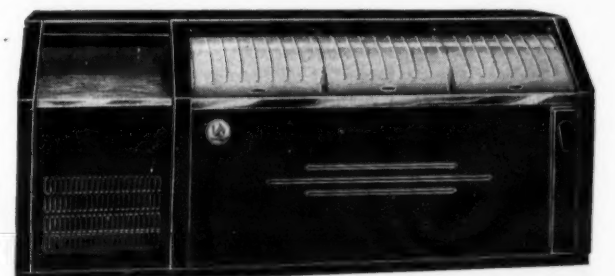
YEARS of exclusive, commercial refrigeration manufacture behind every model in the Complete Line From La Crosse.



Economy Bottle & Keg Pre-Cooler



La Crosse Bottle Cooler

Dry Storage Bottle Cooler With
Utility Housing

2 Keg Direct Draw



Walk In Cooler



Glass Chiller

VISIT OUR BOOTHS #347-349-351 AT ATLANTIC CITY EXPOSITION

LA CROSSE COOLER CO.

2809-17 LOSEY BLVD. SO., LA CROSSE, WISCONSIN

Export Representatives: Melvin Pine & Co.
80 Broad St., New York 4, N. Y.
Cable address: Eximport

La Crosse
Ice Cube Maker

Appliance Wholesalers Up Volume In August, Parts Sales Down

SALES

Kind of Business and Geographic Division	Per Cent Change			No. of Firms Reporting	Aug. 1949 Panel Re-ported Dollar Sales (add 000)
	Aug. 1949 from Aug. 1948	Aug. 1949 from July 1949	8 Mos. from 8 Mos. 1948		
Appliances and specialties wholesalers	0	+20	-5	93	14,940
New England	-21	+36	-11	7	511
Middle Atlantic	+5	+39	-3	28	5,798
East North Central	-15	+14	-4	12	1,464
West North Central	-10	-3	-8	12	804
South Atlantic	-1	+15	-6	14	2,802
Mountain	-6	+35	-25	6	793
Pacific	+26	+27	-6	6	1,079
Refrigeration equipment, parts (com'l)	-4	-6	-9	26	1,210
Middle Atlantic	-9	-3	-8	6	294
East North Central	-8	-17	+3	4	185
South Atlantic	+10	+9	-4	5	266
Pacific	-12	+7	-18	5	190

WASHINGTON, D. C.—August sales of appliance and specialties wholesalers were 20% ahead of July and equal to those of August last year, the U. S. Bureau of Census reported recently.

Sales by commercial refrigeration equipment and parts wholesalers, on the other hand, were off 6% from

July and 4% under August, 1948.

Inventories for the appliance and specialties wholesalers were shaved 5% from July and 4% from last year. For the commercial group, they were down 2 and 4%, respectively.

Regional breakdown of inventory and sales percentages from reporting firms follows:

INVENTORY, END-OF-MONTH (AT COST)

Kind of Business and Geographic Division	Per Cent Change		August 1949 Panel	
	Aug. 1949	Aug. 1949	No. of Firms Reporting	Reported Dollar Values (add 000)
	from	from		
	Aug. 1948	July 1949		
Appliances and specialties wholesalers	- 4	- 5	73	15,172
New England	- 1	+15	7	531
Middle Atlantic	- 2	- 6	17	5,857
East North Central	- 9	-14	10	1,355
West North Central	- 4	- 3	9	1,043
South Atlantic	- 1	- 1	13	2,127
Mountain	- 4	+ 1	6	992
Pacific	+ 3	-16	5	1,026
Refrigeration equipment, parts (com'l)	- 4	- 2	20	2,172
Middle Atlantic	*	*	*	*
East North Central	+ 5	+ 1	4	449
South Atlantic	+ 2	- 1	5	477
Pacific	- 6	+ 2	4	450

*Insufficient data to show separately.

REMA Plans Free Show, Dance for Visitors to All-Industry Exposition

WASHINGTON, D. C.—Two big nights of entertainment, with admission free to all those who have registered for the All-Industry Refrigeration & Air Conditioning Exposition, have been planned for Show week by Refrigeration Equipment Manufacturers Association, sponsor of the Exposition.

Planned for Monday night, Nov. 14, the opening night of the Exposition, is a two-hour all-star revue. It will start at 9:30 p.m. and will be held in the hall which is part of the Atlantic City Auditorium, and which will handle more than 5,000 persons.

Headlining the revue will be a movie or radio star, and several other star acts will also be lined up. A chorus line of 16 girls will also form part of the Show.

On Wednesday night, Nov. 16, the All-Industry Show dance will be held in the American Room of the Traymore hotel. Dancing from 9 p.m. to 1 a.m. will be to the music of the 11-piece "Conventionaires" orchestra and girl soloist. Again, admission will be without charge to those wearing the Show registration badge.

Miss Orange Bowl Picks a Winner



Patricia Fordyce, Miss Orange Bowl of 1949, hands winning ticket in General Electric air conditioning department's water cooler "sweepstakes" to judge of the drawing, W. MacF. Beresford, president, New York City, Lions Club. H. N. McMenimen, manager of distributor sales for the department, looks on. The drawing for the grand prize, a 20-cu. ft. G-E food freezer, climaxed the water cooler sales campaign which ran from June through August. About 1,500 distributors' salesmen participated and closed nearly 7,000 sales. Winner was T. H. Haydon of G-E Supply Corp., Harlan, Ky.

Coal Industry Urged To Aid Heat Pump Development

NEW YORK CITY—The coal industry should assist in research and development of the heat pump and other electricity consuming projects, Clyde Williams, director of the Battelle Memorial Institute of Columbus, Ohio, suggested at the recent convention of the National Coal Association.

The idea was brought forth as a means of aiding the coal industry to regain some of its dwindling market.

"Support can be given by research to develop new ideas or advance practices not yet in wide use that will lead to increased consumption of these forms of energy derived from coal," he stated.

Refrigerated Case Triples Sales Of Fresh Horsemeat for Pets

FRESNO, Calif.—Installing an 8-ft. refrigerated display case for fresh horsemeat, a store specialty, has increased sales by more than 200% for Munger-Hanson Feed Store here.

Four stainless steel trays can accommodate 100 lbs. of meat, which is sliced as the customer wishes it, all lean meat, or fat, as desired.

Kept under low-temperature refrigeration, and displayed so that the customer can select the meat which he wishes, the case has brought customers long distances out of their way in order to buy fresh horsemeat.

Beer Disappears Fast When Customers Help Themselves

FRESNO, Calif.—Through installation of a 6-ft. Hussmann, self-service refrigerator, cold beer sales have been tripled in volume in the space of a few months at the Thrifty Drugstore here.

The Thrifty Drugstore formerly used the reach-in type of wall refrigerator but found that it was difficult to serve several customers at once. Frequently salespeople had to leave the floor to go around into a walk-in refrigerator and pick out the brand and number of bottles the customers wanted to buy.

Taking a cue from food supermarket retailing of refrigerated products, the management hit upon the idea of an open, self-service refrigerator, which requires no attention from store personnel, other than ringing up sales on the cash register.

This is located half way down the store on the right side, accommodates from 6 to 10 cases of pint or quart-size bottles, as well as several cases of canned beer.

Prices are relayed by means of small signs along the mirror over the beer displays, and customers may select handy shopping bags nearby to pick up beer in less than case amounts.

A sign in the window invites "Serve yourself from our refrigerated beer display." Also, a thermometer is placed in the center front of the reach-in box, which shows that temperature is maintained below 45° F. at all times.

The result, chiefly because downtown workers found it easy to drop in and pick up cold beer without wasting time, has been a tripled sales volume.

Custom-Built Refrigerator Spurs Biologicals Trade

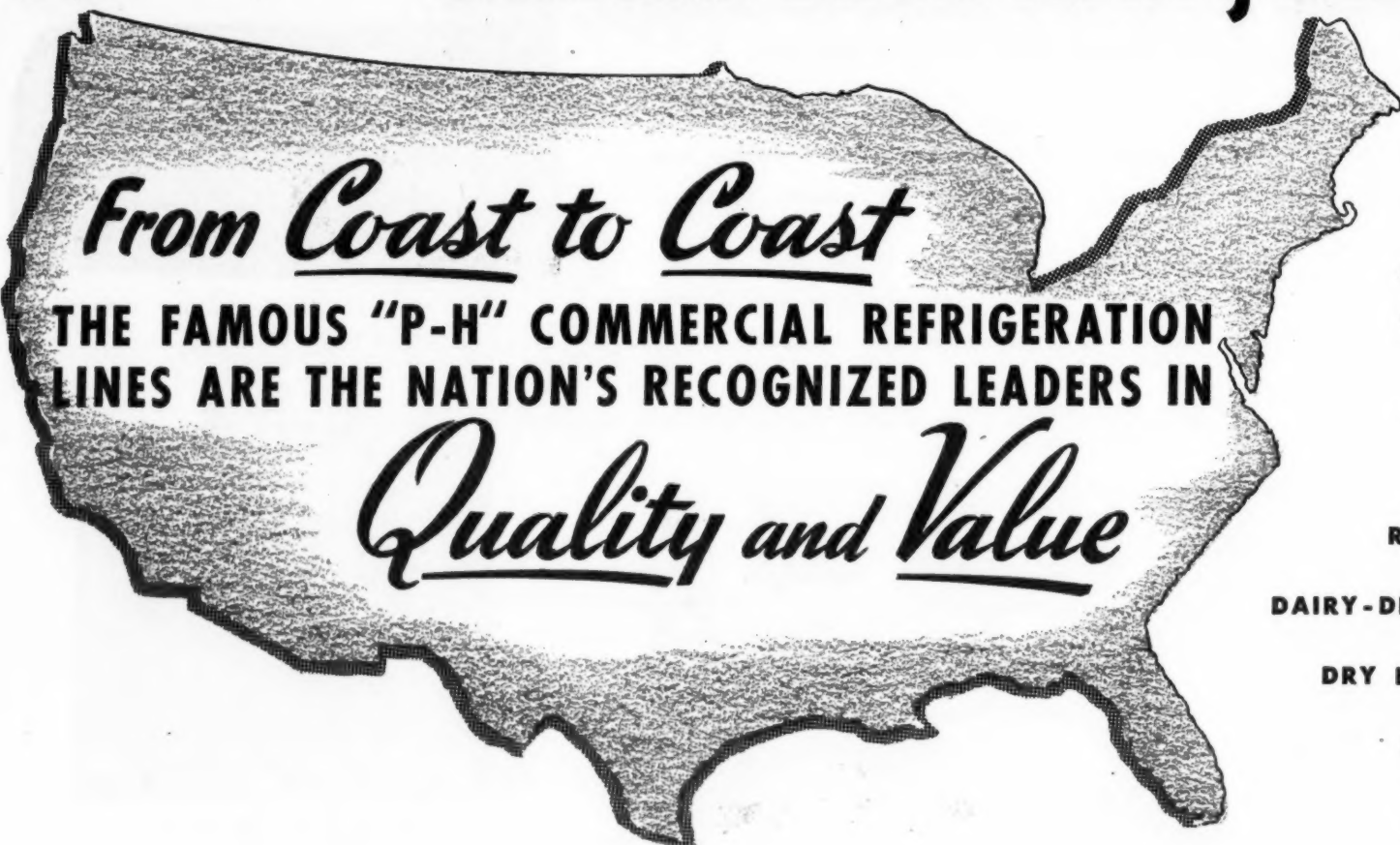
FRESNO, Calif.—A 6-door refrigerator, with more than 20 cu. ft. of space available for storage of viruses, anti-toxins, and biologicals for animal diseases, has helped to make veterinary supplies an outstanding profitable department at the Potter Drug Co. on Fulton St. here.

The refrigerator, custom-built by a local refrigeration firm, has two compartments operating at separate temperatures, 35° F. in one and 45° F. in the other.

Potter Drugstore keeps on hand at all times serums in sufficient quantity to combat any sudden epidemic of animal diseases which may strike the local stock-growing industry, and this fact is played up regularly in weekly newspaper advertising.

Also, the store runs a daily "discussion broadcast" at 5 p.m., when the imminence of animal diseases is discussed, together with means of combatting them. In summing up, an invitation is issued to poultry raisers, stockmen, and farmers to visit the "refrigerated display" at the Potter store.

Attention DEALERS! NOW OPEN...A LIMITED NUMBER OF Desirable Direct-Factory Dealerships



OFFERING
Bigger Profits

FOR YOU
ON

- REACH-IN CABINETS
- ★
- DAIRY-DELICATESSEN CASES
- ★
- DRY BEVERAGE COOLERS
- ★
- DOUGH RETARDERS
- ★
- FLORIST CABINETS

As a result of our decision to confine our product program to Special-Purpose Lines of commercial refrigeration cases and cabinets . . . plus our determination to give our many users better coverage and service, we are now opening direct-factory dealerships in a limited number of selected territories throughout the country.

If you are an established refrigeration dealer . . . hotel, restaurant, or bakery supply house . . . or, beverage cooling equipment distributor, this may be your long sought opportunity to supplement your present line with a valuable direct-factory franchise to handle one or more of America's top value "Old Name"

lines of special-purpose commercial cases and cabinets.

Long recognized as the finest quality equipment in their respective fields, Puffer-Hubbard "Lifetime" cases and cabinets have all-porcelain or stainless steel exteriors . . . all-porcelain interiors . . . patented "Grad-U-Matic" air conditioning systems . . . and a host of other important selling features. Dollar-for-dollar, feature-by-feature, they will give you a definite edge on competition in today's highly competitive market!

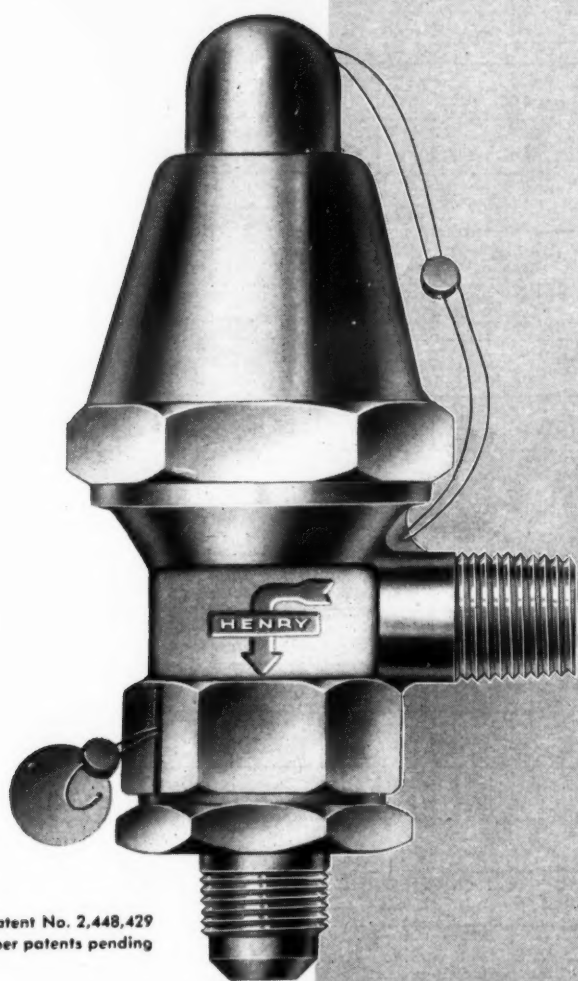
It will pay you well to investigate this sound profit-making opportunity at once. We can prove our case to you!

For Full Details
Write Today



PUFFER-HUBBARD MFG. CO., Grand Haven, Mich.

VISIT our Booth and see the performance of this amazing new valve which will be demonstrated at the 6th All-Industry Refrigeration & Air Conditioning Exposition—November 14th to 18th—Atlantic City, New Jersey—Booth Nos. 215, 217, 219.

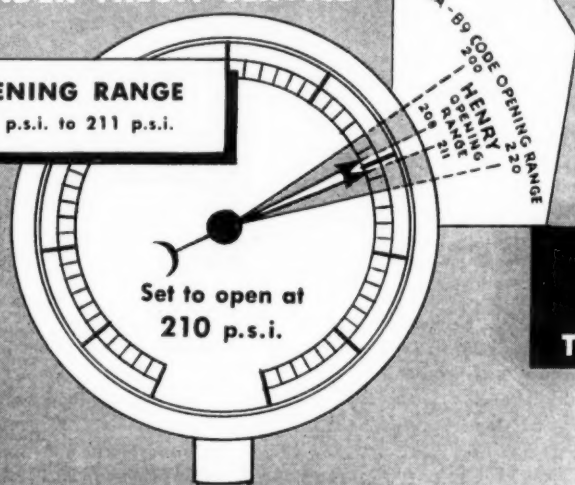


U. S. Patent No. 2,448,429
and other patents pending

BUILT-IN
REPLACEABLE
RUPTURE DISC
CARTRIDGE IN
OUTLET PORT

PERFORMANCE OF TYPE 545 SUPER RELIEF VALVE UNDER FREON SERVICE

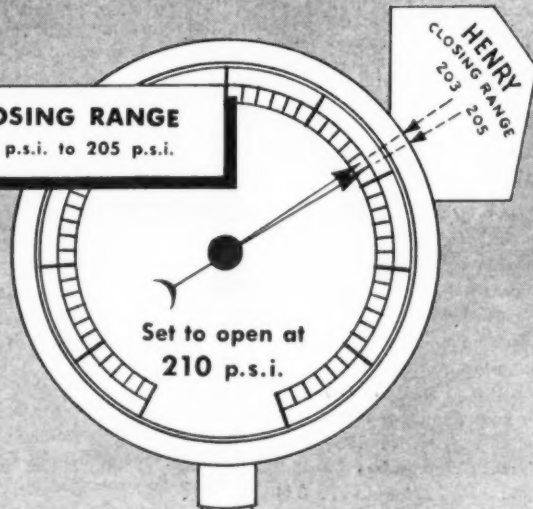
OPENING RANGE
208 p.s.i. to 211 p.s.i.



**MAXIMUM DEVIATION
FROM SET PRESSURE ONLY 1%**

THE amount of deviation from set pressure under ASA-B9 Code for Relief Valves is $\pm 5\%$. The Henry deviation of only 1% has set a new standard for performance in the refrigeration and air conditioning industry due to its diaphragm type of construction and controlled cushioned seating.

CLOSING RANGE
203 p.s.i. to 205 p.s.i.



**MAXIMUM DEVIATION
FROM SET PRESSURE 3.3%**

Introducing

The *New*

HENRY

Super

Diaphragm Relief Valve

IT SETS A NEW STANDARD OF PERFORMANCE IN PROTECTING
THE SYSTEM AND PREVENTING LOSS OF FREON

ALL OF THESE ESSENTIAL FEATURES NOW INCORPORATED IN ONE VALVE

- 1 POSITIVE OPENING AND CLOSING AT PREDETERMINED PRESSURE**
Due to absence of stickage and controlled cushioned seating.
- 2 UNIFORM DISCHARGE RATE**
Due to the increased power delivered thru pressure actuated diaphragm.
- 3 A REPLACEABLE RUPTURE DISC CARTRIDGE IS BUILT INTO THE OUTLET PORT OF THE VALVE AND PROVIDES ADDITIONAL PROTECTION AGAINST LOSS OF FREON.**
This valve design permits locating and sealing the rupture disc directly in the outlet port, since any pressure built up between valve seat and rupture disc, due to momentary overpressure, will aid rather than retard opening of the valve. Furthermore, the rupture disc can be replaced without removal of the valve. The fragile rupture disc is thoroughly protected in the replaceable cartridge.
The use of this valve meets the requirements of paragraph U-10(b) of the A. S. M. E. Unfired Pressure Vessels Code which permits the use of a rupture disc at the outlet port of a relief valve.
- 4 NARROW RANGE BETWEEN OPENING AND CLOSING**
Less than the allowable plus or minus 5% of setting specified for opening under Safety Codes.
- 5 HIGH DISCHARGE CAPACITY RATING**
Established by measurement of flow thru calibrated nozzles.
- 6 APPROVED BY SAFETY AUTHORITIES**
Approved for use under Refrigeration and Air Conditioning Codes for relief of excess pressure.
- 7 TESTS OF OPENING AND CLOSING PRESSURES**
Results of a typical test of this new valve using Freon are shown in the gauge illustrations and prove that the range between opening and closing pressures is less than plus or minus 5% of the set pressure.
The A. S. A.-B9 Code specifies that the opening pressure shall not vary more than plus or minus 5% from the set pressure.



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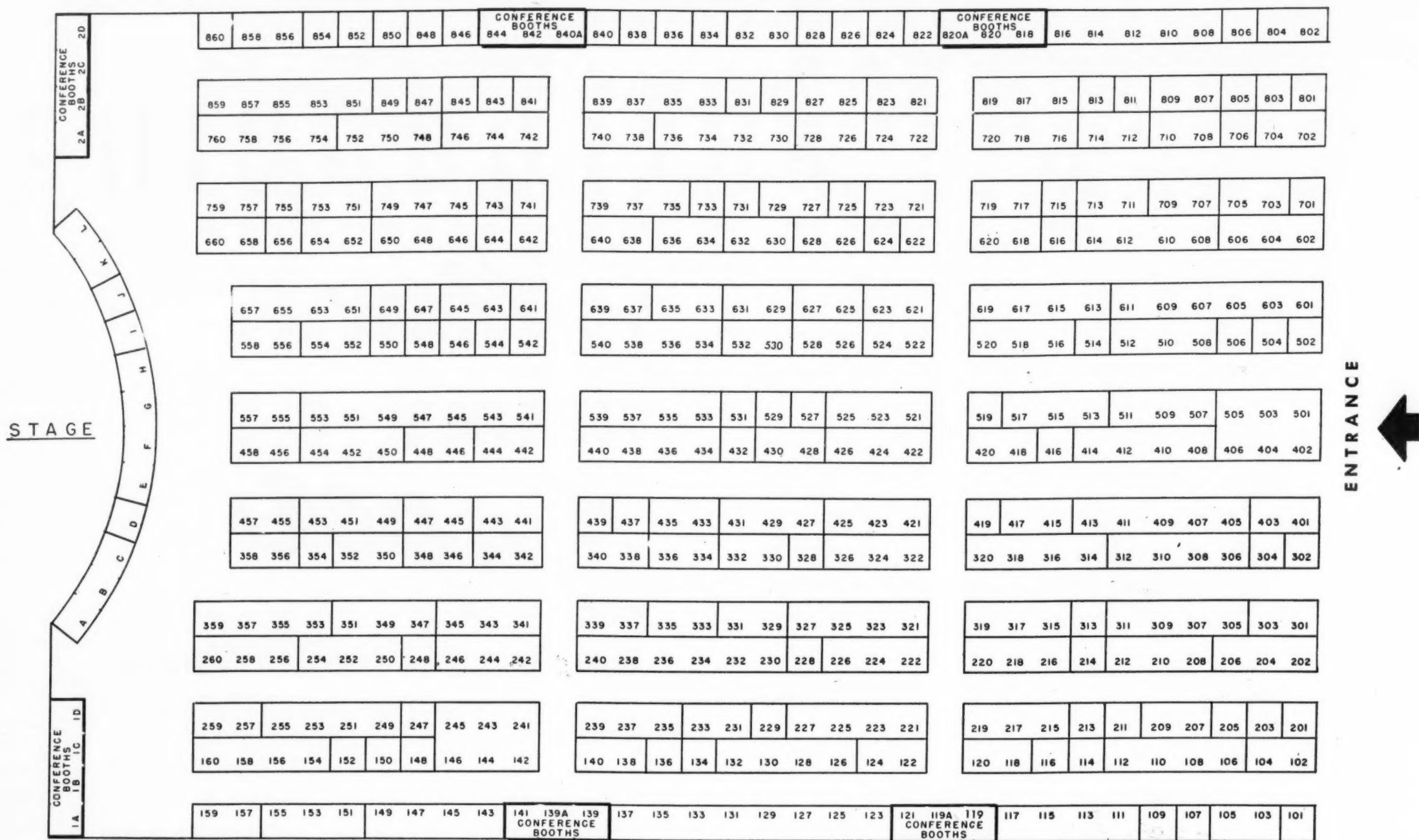
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Streamlined body...28 inches wide.
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PRODUCTS CORP.
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High Speed Era

Compressor Speeds Are Creeping Up, But Machines May Hold Up Even Better

INDIANAPOLIS — "Compressor speeds are gradually creeping up because the customer is demanding more for his dollar. Smaller high-speed units can produce as much or more B.t.u. per dollar than large machines," asserted J. L. Roth, national sales manager for General Electric Co.'s open condensing units, in a talk before the second annual convention of the Hoosier State RSES association here.

Discounting the fear that increased speed means shorter compressor life, Roth declared that "the life of equipment depends on how well it's designed for that particular speed, not simply how fast or how slow it goes."

"In discussing this, we are concerned with two types of speed—rotational and linear," he explained. "Rotational speed involves the friction created by a rotating force around a stationary element (as found in bearings), while linear or 'sliding' speed relates to piston movement."

"What has speed got to do with bearings? The bearing itself is never touched by the shaft because there's a film of oil between the two surfaces. Without oil a bearing won't last long at any speed," Roth declared.

"We at G-E have developed force-feed lubrication that pumps oil from the crankcase first to the shaft seal and thence to the crankshaft bearings and cylinder walls."

"Maintaining of proper balance between pressure on the piston and frictional pressure on the bearing also is an important factor in designing compressors for high speed operation," he pointed out.

Re-emphasizing his statement that speed alone is no criterion of equipment life, Roth cited the increasing speed of automobile engines and other mechanisms.

Turbines now range in speeds from 1,800 to 11,000 r.p.m.; aircraft gas turbines operate at 40,000 r.p.m., and the engine of a car going 60 m.p.h. is traveling at 3,000 to 4,000 r.p.m., he said.

"But we never worry about this engine speed in an automobile. Speed, after all, is a relative term," Roth explained.

As for linear speed involved in piston travel, he declared that "small pistons in a high speed compressor could have no more feet per minute of linear travel than a slower speed compressor in which pistons had a longer stroke."

He gave this formula for determining the linear speed of pistons: Stroke (in.) x 2 x R.p.m. = F.p.m.

12 (in.)

For a small piston with a stroke of 1½ in., in a compressor running at 1,520 r.p.m., this would work out as:

$$1\frac{1}{2} \times 2 \times 1,520 = 317 \text{ f.p.m.}$$

12

Whereas the formula for a piston with a 2½-in. stroke at 800 r.p.m. would show:

$$2\frac{1}{2} \times 2 \times 800 = 333 \text{ f.p.m.}$$

12

"Thus the smaller piston traveled only 317 f.p.m. while the larger piston in a compressor operating about half as fast actually would be traveling at 333 f.p.m.," he explained.

The same also applies to rotational bearing speeds, Roth declared, citing the following equation:

$$\text{Circumference (in.)} \times \text{R.p.m.} = \text{F.p.m.}$$

12 (in.)

In the above, a bearing 5 in. in diameter operating at 200 r.p.m. would be traveling at 262 f.p.m. while a 1-in. diameter bearing at 800 r.p.m. would have a rotational speed of but 210 f.p.m., according to Roth's figures.

"Belt life should also be longer in high-speed open compressors," he said. "On a slow-speed machine we have a small pulley on the motor shaft and a large pulley on the compressor shaft, while with the higher speed units we increase the size of the motor pulley. This means that the bending radius on the belt is less and thus the belt should have longer life."

Besides these advantages obtainable with smaller, high-speed condensing units, Roth also cited the compactness angle (which saves space), ease of handling (which could save labor costs on installation), and light weight (which lowers shipping costs).

Master Program Lists Industry Show Events

Sunday, Nov. 13

9 a.m.—Refrigeration Service Engineers Society registration opens at Ambassador hotel.

9 a.m.—Refrigeration & Air Conditioning Contractors Association open meeting begins in Ambassador hotel. Everybody welcome.

10 a.m.—Refrigeration Equipment Manufacturers Association board of directors meets in Hotel Traymore.

10 a.m.—Refrigeration Equipment Wholesalers Association board of directors meets in Hotel Claridge.

12:30 p.m.—Refrigeration & Air Conditioning Contractors Association luncheon, Renaissance room, Ambassador hotel.

1 p.m.—Refrigeration Service Engineers Society business meeting in "22" Club at Ambassador hotel.

2:30 p.m.—Refrigeration Equipment Manufacturers Association export group meets in Hotel Traymore.

2:30 p.m.—Refrigeration & Air Conditioning Contractors Association second open session begins in Ambassador hotel.

4 p.m.—Refrigeration Service Engineers Society educational feature at Ambassador hotel.

8 p.m.—Refrigeration & Air Conditioning Contractors Association board of directors meeting in Ambassador hotel. Open to interested members.

Monday, Nov. 14

9 a.m. to 1 p.m.—Refrigeration Service Engineers Society educational meeting in "22" Club, Ambassador hotel.

9 a.m. to 12 Noon—Refrigeration Equipment Wholesalers Association registration in Piccadilly Lounge, Claridge hotel.

9 a.m. to 1 p.m.—Refrigeration & Air Conditioning Contractors Association closed session in Ambassador hotel.

10 a.m.—Air Conditioning & Refrigerating Machinery Association small compressor and condensing unit section meeting, hotel Chalfonte-Haddon Hall.

12:30 p.m.—Refrigeration Equipment Wholesalers Association luncheon, Ocean dining room, Claridge hotel.

1 p.m.—Refrigeration & Air Conditioning Contractors Association luncheon for 1949-50 board of directors at Ambassador hotel.

1 p.m. to 9 p.m.—All-Industry Show, Atlantic City Auditorium. (Attendance on Monday, Nov. 14, limited to service engineers, dealers, and contractors.)

2 p.m.—National Commercial Refrigerator Sales Association board of directors meeting at Ambassador hotel.

2:35 p.m.—Refrigeration Equipment Wholesalers Association 15th annual meeting in Trimble Hall, Claridge hotel.

5 p.m.—Refrigeration Equipment Wholesalers Association board of directors meeting, Claridge hotel.

Evening—Refrigeration Equipment Manufacturers Association sponsored entertainment in Atlantic City Auditorium.

Tuesday, Nov. 15

9 a.m. to 1 p.m.—Refrigeration Service Engineers Society educational meeting in "22" Club, Ambassador hotel.

10 a.m. to 6 p.m.—All-Industry Show, Atlantic City Auditorium.

10 a.m. to 3 p.m.—National Commercial Refrigerator Sales Association annual meeting, panel discussions, and election of officers at Ambassador hotel.

10 a.m.—Air Conditioning & Refrigerating Machinery Association joint meeting of room air conditioner section and self-contained air conditioner section at Hotel Chalfonte-Haddon Hall.

10 a.m.—Air Conditioning & Refrigerating Machinery Association joint meeting of large compressor and condensing unit section and central station air conditioning and refrigeration equipment section in Hotel Chalfonte-Haddon Hall.

4 p.m.—National Commercial Refrigerator Sales Association board of directors meeting in Ambassador hotel.

7 p.m.—National Commercial Refrigerator Sales Association annual banquet at Ambassador hotel.

7 p.m.—Refrigeration Service Engineers Society annual banquet and entertainment, main dining room, Ambassador hotel.

7:30 p.m.—Refrigeration Equipment Wholesalers Association informal dinner dance, Trimble Hall, Claridge hotel.

Wednesday, Nov. 16

10 a.m.—Refrigeration Service Engineers Society business session in "22" Club, Ambassador hotel.

11 a.m.—Air Conditioning & Refrigerating Machinery Association board of directors meeting at Hotel Chalfonte-Haddon Hall.

1 p.m. to 6 p.m.—All-Industry Show, Atlantic City Auditorium.

9 p.m. to 1 a.m.—Refrigeration Equipment Manufacturers Association sponsored dance in American room, Traymore hotel. Admission free by showing registration badge.

Thursday, Nov. 17

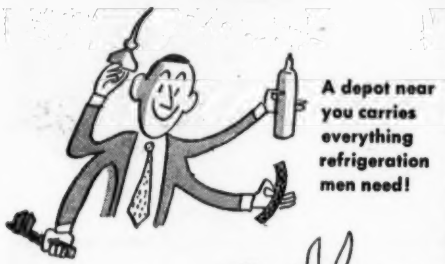
10 a.m. to 6 p.m.—All-Industry Show, Atlantic City Auditorium.

Friday, Nov. 18

10 a.m. to 4 p.m.—All-Industry Show, Atlantic City Auditorium.

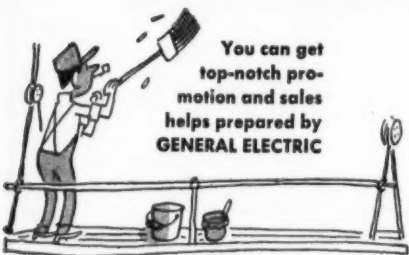
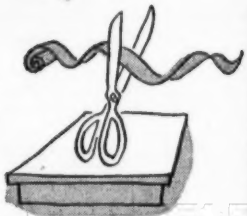
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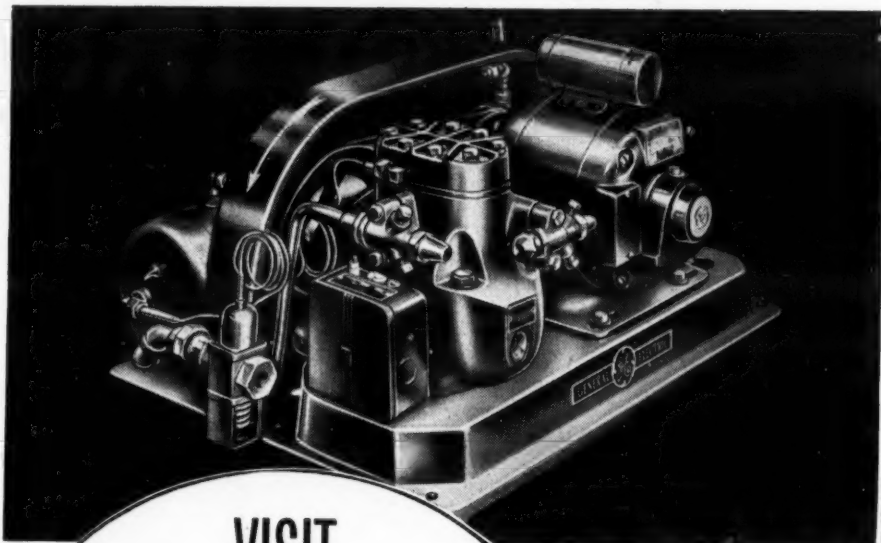
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Atlantic City Nov. 14-18

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G-E representatives will be glad to explain the parts depot plan to you.

G-E Parts Depots handle: G-E condensing units, 1/4-10 hp.; genuine G-E replacement parts for units 1/4-75 hp.; G-E compressor bodies, 1/4-75 hp.; G-E sealed condensing units for replacement.



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GENERAL  ELECTRIC

Market Analyst Is Optimistic on the Industry's Future

LOS ANGELES—How a top-flight market analyst views current trends in the commercial refrigeration and air conditioning market was brought to light during the panel discussion on "Trend of Future Growth of Commercial and Industrial Refrigeration in Southern California" sponsored recently by the Los Angeles section of the A.S.R.E.

William Borton, well-known market research analyst in these parts and a member of the faculty of the University of Southern California, had this to say about the industry:

Condensing units shipped by manufacturers in 1948 totaled four times the number of units shipped in 1940, but the 1948 total was off some from the 1947 peak.

Apparently when retail trade dips the air conditioning and refrigeration business dips a little more. However, the long range growth seems to indicate that the industry is gradually playing a more and more important part in the national economy.

In 1947 one fourth of the refrigerated cases in use in retail trade were being used for self-service. Self-service is a powerful selling point as it means labor saving and labor saving is a prime factor.

Self-service is strongest in delicatessen and produce lines. In meat, self-service cases have produced much conflicting experience but growth is probable.

Proper operation of meat self-service in large markets can be cost savers. Borton pointed out that shelf life of produce doubles with every 10° F. drop in temperature, but the humidity problem relative to many produce items still has to be solved. If it can be solved, growth in this line will result. If not, ice refrigeration for produce will be dominant.

Figures also revealed that of the total air conditioning business done commercial applications accounted for 80% of the total and industrial uses accounted for the remaining 20%. In the commercial field the three leading users were in the following order: retail stores, offices and office buildings, and theaters.

Of approximately 500 million dollars worth of commercial air conditioning and refrigeration business done in 1947, about 11% of the total was accounted for by bottled beverage coolers, with the food business accounting for 42% of the total.

G-E Appoints Two New Service Representatives

BRIDGEPORT, Conn.—Appointment of new appliance service representatives in the north central and southeastern districts was announced recently by W. C. Noll, manager of the technical and educational sections of the General Electric product service division.

Philip Klein has been assigned to the north central district and D. A. Washburn to the southeastern district.

Klein joined General Electric at Lynn, Mass. as a test engineer in 1943, and more recently was service supervisor in the product service division.

Washburn joined General Electric at Erie, Pa., in 1946 and transferred to Bridgeport as a member of the product service division.

Quick and Painless

Registration For All-Industry Exposition Will Be Simple Procedure at the Door

WASHINGTON, D. C.—Registration at the Sixth All-Industry Refrigeration and Air Conditioning Exposition will be quick and painless, the management announces.

"This is strictly a trade show," says W. Vernon Brumbaugh, executive secretary of the Refrigeration Equipment Manufacturers Association, sponsor of the show, "and we want the maximum number of interested people to see it."

"We realize that registration is necessary for everyone who visits the exposition and we intend to make it easy for them."

Registration desks will be placed in the lobby of the Atlantic City Auditorium and will be open every day from 9 a.m. until the close of the show. The registration booths will be well staffed with competent help.

All that is necessary in order to

register is to fill out a simple card showing name, address, and business connection of the one registering, and he or she will immediately receive a registration badge which admits him to the Auditorium during the show hours.

Only refrigeration service engineers, dealers, and contractors will be admitted to the exposition on the first day, Monday, Nov. 14, but everyone who possibly can is urged to register on Monday in order to secure admission to the big entertainment feature, the Sixth All-Industry All-Star Revue on Monday night.

Members of the Refrigeration Service Engineers Society may register at its own convention headquarters in the Ambassador hotel. They will then be given a registration badge and will not need to re-register at the Auditorium.

Members of the Refrigeration

Equipment Wholesalers Association with headquarters at the Claridge hotel, may likewise register at their own headquarters, if more convenient, and the registration badge which they receive will be accepted for admission without re-registration at the Auditorium.

Many exhibitors will be in Atlantic City several days in advance of the exposition in order to set up their exhibits and for their convenience as well as for the convenience of advance visitors, the registration headquarters in the lobby of the Auditorium will be open from 9 a.m. to 6 p.m. on Saturday and Sunday, Nov. 12 and 13, preceding the show.

Advance registration on these two pre-show dates will speed up admission. Registration badges will be necessary for admission to the big All-Industry Revue to take place Monday night.

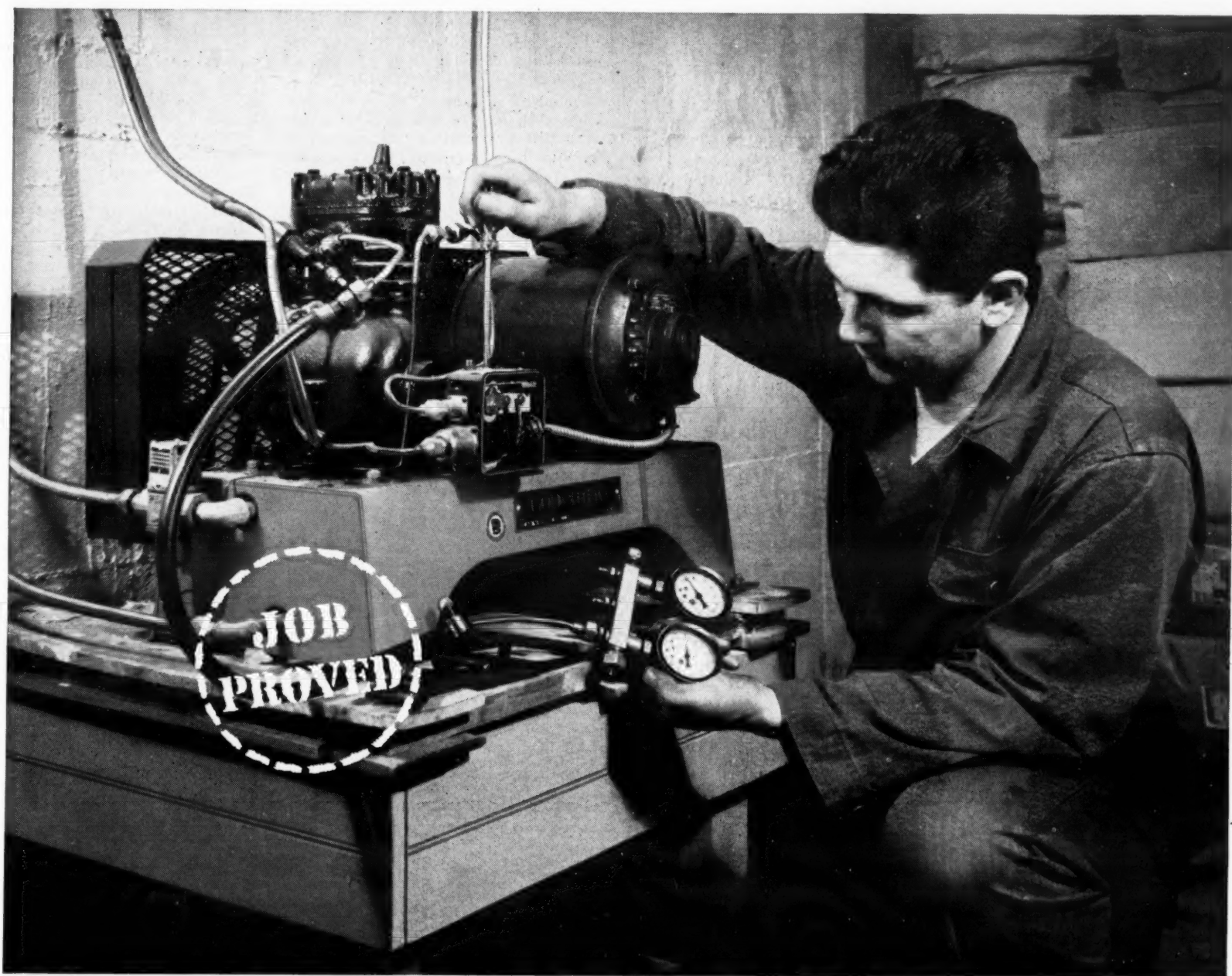
Offer Refrigerator On a 'Bid Basis' as Sales Stimulator

OMAHA, Neb.—Offering a new 8-cu. ft. refrigerator on a "bid basis" and inviting customers to drop their bids in a box in the store beside the refrigerator, has helped to stir up much interest for Rank's, appliance dealership here.

With many homeowners extremely price-minded and willing to search diligently for bargains, the impulse to make a bid and drop it in the box is irresistible, according to T. V. Rank, head of the store.

To make certain that the idea got plenty of attention, he advertised the bid offer with instructions to the patron to submit a bid "for what the refrigerator is worth to you. You may be able to buy it for as little as \$1," the advertisement stated.

At the end of the first week, bids accumulated were within a few dollars of the selling price of the refrigerator, according to the management.



SUNISO CUTS SERVICE CALLS

Distributor Switches to Suniso Oil, Now Makes Only Routine Inspections

Servicing units in the retail outlets of a big dairy was proving costly for a refrigeration equipment distributor. Gum and sludge formed, progressively lowering the efficiency of the compressors and increasing the load on the motors. As this condition built up, the belts slipped and eventually wore out. Finally, it became necessary to overhaul the compressor units.

Acting on the advice of a Sun Engineer who was called in to study

the problem, the company changed to a policy of charging and servicing the units with Suniso Refrigeration Oil. In 10 years, no mechanical difficulty traceable to lubrication has developed in these units, and service calls have been reduced to ordinary routine inspections.

Such fine performance explains why Suniso Oils are the predominant choice of original equipment manufacturers in the refrigeration and air-conditioning industry.

The different grades of Suniso Oils have extremely low pour points and low wax-separation points. All have exceptionally high dielectric strength and high resistance to chemical change when mixed with Freon or any other modern refrigerant.

Ask your Suniso jobber for a free copy of the illustrated booklet "Lubrication of Refrigeration and Air-Conditioning Equipment" or write Department RN-10.

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To Solve Your MOISTURE PROBLEMS

MOLDDED DU-CAL DRIER

The new ideal drier, not only drying agents but liquid and gas moisture in any location in the system.

SILICA GEL

The perfect physical adsorbent for removing moisture from the low side, removing any or all water vapor.

Both MOLDDED Du-Cal Drierite and Silica Gel available in both Remco's Cross-Flo and Standard-Duty Driers.

REMCO INCORPORATED
ZELIENOPLE, PA.

Literature and Prices on Request

Frosted Glassware Is Soda Fountain Help

ST. LOUIS—The fact that all fountain glassware is "pre-refrigerated" until frosted over the year-round, in a special low-temperature refrigerated compartment, has had a lot to do with a steady increase in fountain drink sales at Glaser Drug Co. here, according to Morris Glaser, head of the firm.

Operating on the theory that when the fountain customer orders a cold drink he wants it really cold, Glaser Drugs keeps all fountain glassware in a small stainless steel refrigerator, in the center backbar of the fountain. From two dozen to 36 glasses, depending upon the size, can be easily accommodated, and a 10° F. temperature insures a smooth overall coat of rime frost on each glass, within 15 minutes to half an hour after the glass is thus placed.

Fountain dispensers are instructed to arrange ice, fruit, and other components of the fountain drink for quick mixing of the drink before getting the glass out of the refrigerator. Thus, cola drinks, root beer, lime rickeys, and other popular soft drinks are twice as appetizing when served in the frosted glass.

Weatherhead Addition

ST. THOMAS, Ont., Can. — A \$65,000 addition will be built to the Weatherhead Co. of Canada here, it was announced recently by N. E. Kilmer, general manager. The company manufactures parts for refrigerators, automobiles, and oil burners.

NCRSA Programs Panel Discussions At Atlantic City

ATLANTIC CITY, N. J.—Five panel discussions on problems affecting "enclosure" dealers and distributors will highlight the annual meeting of the National Commercial Refrigerator Sales Association to be held at the Ambassador hotel here Tuesday, Nov. 15, during Show week.

All NCRSA events are scheduled for the Ambassador and will include a directors' meeting at 2 p.m. Monday, Nov. 14; the annual meeting and panel discussions running from 10 a.m. Tuesday until 3 p.m., when officers will be elected; another directors' meeting at 4 p.m.; and concluding with the annual banquet at 7 p.m. Tuesday, Nov. 15.

The panel discussions will be conducted Nov. 15 by top dealers and distributors who will give short talks pointing out the problems, and suggested solutions, according to Russ Maintain, NCRSA president.

Problems to be brought up in the panels include the following:

1. "The Future of Refrigerator Dealerships."
2. "What Are the Worst Evils and Grievances of Dealers and How Can They Be Alleviated?"
3. "Can Direct Sales by Manufacturers at Dealer Prices Be Stopped?"
4. "How To Organize Local Dealer Groups for Mutual Welfare and To Reduce Unfair Trade Practices."
5. "How To Develop Good Labor Relations Policies That Gain Cooperation of Unions and Build Goodwill."

'Job Procedure Chart' Proves Helpful To Refrigeration Contractor's Operation

Can Tell at Glance Where a Job Stands

CLEVELAND—There is considerable use for a "job progress" board or chart in a commercial refrigeration and air conditioning contractor's operation, Refrigeration Sales Corp. here has found.

Purpose of such a chart or board (Refrigeration Sales Corp. calls its own development a "Job Procedure" board) is to provide information at a glance on the progress of any particular job which the company has undertaken.

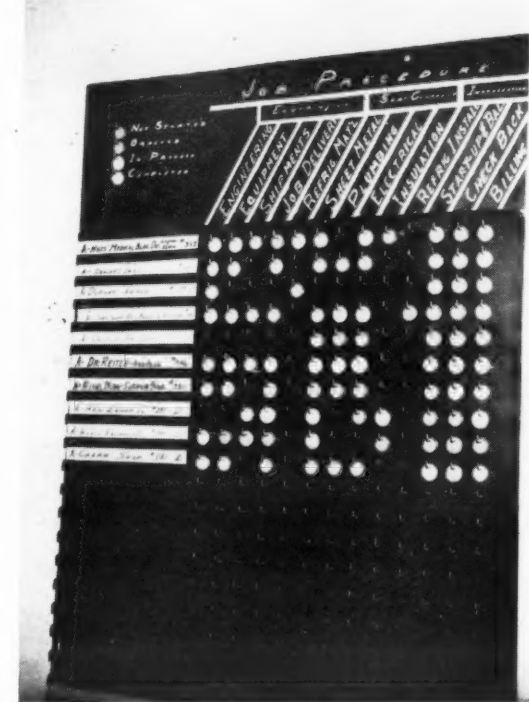
"It is used principally on installations which involve construction and sub-contracting, but it can be applied to some packaged installations," says Warren Farr, head of Refrigeration Sales Corp.

"What it does," Farr points out, "is to enable anyone from any department who has an interest in the job, to determine quickly and without asking everyone in the place just where the job stands."

"It is very helpful where progressive billing is being done on a job."

The board is designed and constructed in a simple manner. Slots down the left hand side take slides on which are written the names of the jobs. Lined up with each job name are hooks on which are placed tags of various colors.

Above each row of tags is the name of some step in the job procedure.



In this "Job Procedure Chart," placed in use by Refrigeration Sales Corp., Cleveland, colored tags are used to denote the current status of various stages of a refrigeration and air conditioning job. The headings cover phases of the three main stages of a job—"equipment," "sub-contracts," and "installation."

cedure. These steps are split into three general groups.

In "Equipment," the Group No. 1, are "engineering," "equipment," "shipments," "job delivery," and "refrigeration materials."

"Sub-Contracts" is the No. 2 Group and this includes "sheet metal," "plumbing," "electrical," and "insulation."

Under "Installation," the No. 3 Group, are "refrigeration installation," "start-up and balancing," "check back," and "billing."

The significance of the various colored tags is as follows:

- Red—"not started."
- Green—"ordered."
- Yellow—"in process."
- White—"completed."

A yellow tag under the "billing" heading means that progressive billing—in which the completed parts of a job are billed every 30 days during the period it is under construction—is being applied.

Gross Distributors, Inc. Move to New Quarters

NEW YORK CITY—Gross Distributors, Inc., major appliance distributor here, recently moved into its new building at 214-216 W. 14th St. between 7th and 8th Aves., Benjamin Gross, president has announced.

The move completed consolidation of the firm's sales, merchandising, accounting, service, and parts departments and the executive staff under one roof. The company will occupy the upper four floors of the Gross building, as the structure is called.

The new facilities include a large and carefully planned showroom, a stage and auditorium for product presentations, a separate sales and product training room, adequate office facilities for individual conferences, Gross said.

BRUNNER
SINCE 1906

REFRIGERATION helps you serve better

Cast a Critical Eye on these Compressor parts!



The true usefulness of any refrigeration equipment stems from the operating efficiency of the compressor. The parts are few...assembly is relatively simple. It's what you can't see that is so vitally important in measuring the worth of your investment...proven engineering, durability of metals and the watch-like precision of manufacture.

Before final selection of refrigeration equipment, it will be well worth your time to talk with a Brunner* representative. Ask for evidence of BTU capacities. Compare operating speeds. Get the facts on service life, dependability, operating economy. Know every reason why more and more buyers specify Brunner Refrigeration Condensing Units.

BRUNNER MANUFACTURING CO.
Utica 1, New York, U. S. A.

*Equipment manufacturers, installation contractors, service companies, can profit thru identification with Brunner. Have the advantages of a complete, customer-accepted line. A Brunner factory representative will call on request and without obligation.



REFRIGERATION
CONDENSING UNITS
...a size and type
for every purpose

BRUNNER
SINCE 1906

AIR AND WATER COOLED MODELS
1/4 HP. TO 30 HP.

SEE EBCO! the best in the show!



Sixth All-Industry Refrigeration and Air Conditioning Show

Three Outstanding Oasis Booths

See the Hottest Thing in Refrigeration—the new OASIS AIR DRIER in Booth 544. Automatic Operation—Dries Air by Electrical Refrigeration. Easy to sell. A real volume-builder. Valuable territory open for enterprising distributors and dealers.

Great Display of Oasis Water Coolers

See the new Oasis, explosion-proof, electric drinking water cooler in Booths 642 and 741. And the sensational, double-duty, bubbler compartment, Oasis water cooler, Model OP-3R. You are welcome to examine all our other Oasis models on display from the complete line of electric drinking water coolers, made by the world's largest manufacturer of electric drinking water coolers, The EbcO Manufacturing Company.



Remember these booths

544
642
741

THE EBCO MANUFACTURING CO.
401 WEST TOWN STREET COLUMBUS 8, OHIO

Visitors to Show From Abroad Get Special Attention

WASHINGTON, D. C.—The foreign visitor will be given special attention at the 6th All-Industry Refrigeration and Air Conditioning Exposition.

The Refrigeration Equipment Manufacturers Association, sponsor of the Show, is setting aside a special "International Headquarters" booth, where the visitor from abroad may register, and where he may make contacts with whatever branches of the vast industry he desires.

Distinctive ribbons will be provided for the foreign visitor so that he will be given special attention.

Members of REMA's Washington staff will be on hand to facilitate meetings of foreign visitors and manufacturers and to provide information to foreign visitors on the locations of particular displays they might wish to see.

New Freezer Cabinet Will Merchandise Frozen Orange Juice

NEW YORK CITY—A 4-cu. ft. freezer cabinet especially designed for the merchandising of Minute Maid frozen orange juice will be put into extensive use in retail outlets next year by Vacuum Foods Corp., packers of that brand of juice, it was reported here recently.

The case will be used to establish brand identification through an illustrated color facing and make selection easier, the reports said. It will hold 200 cans of the frozen juice.

The packer is also said to be experimenting with a 12-oz. and 4-oz. can to provide a wider selection than the present 6-oz. can permits.

Markovitz Is Production Chief for Howard Co.

PHILADELPHIA—Ben Markovitz has been appointed general factory production manager and design engineer for the Howard Refrigerator Co. here, the company has announced.

Markovitz was formerly connected with the Jordon Refrigerator Co. here for the past five years as factory superintendent in charge of production. Prior to that time he was employed as plant superintendent by the Fogel Refrigerator Co. for 15 years.

Stanley and Son Opens Commercial Sales Setup

LAKE CHARLES, La.—V. H. Stanley and Son has opened a complete commercial refrigeration sales and service establishment at 502 Broad St. right across from the post office here, V. H. Stanley announced.

The firm is franchised for all Friedrich Sales Corp. products in an 11-parish area from the Texas state line to Morgan City.

Stanley was formerly sales manager for Warren Mfg. & Refrigerator Co. of Beaumont, Tex. Russel H. Stanley will handle sales and engineering.

New Data Pamphlet Is Published on Controls

NEW YORK CITY—The American Society of Refrigerating Engineers has issued its 47th Application Data pamphlet entitled "Refrigeration Controls."

AD 47 contains data on the construction and application of different types of valves and switches used for refrigerant control.

The pamphlet is divided into sections and each section explains the function and operation of the following:—automatic expansion valve, thermostatic expansion valve, high side float valve, low side float valve, float switch, evaporator pressure regulator, liquid stop valves, suction stop valves, and injectors and pumps, which are used to obtain complete evaporation of liquid refrigerant.

William P. Myers, Jr., of Alco Co. is the author of this pamphlet.

Copies may be obtained from ASRE headquarters, 40 W. 40th St., New York, for 45 cents each.

For a Sidewalk Display, Just Substitute Two Display Cases--It's Done In St. Paul

ST. PAUL, Minn.—Reasoning that there is nothing particularly new about a plateglass window through which passersby look into the meat market, Lawrence Tittle, owner of Tittle's Market here, has gotten far more selling efficiency out of his store front by walling in the upper part with glass block, and replacing the lower area with two permanent "sidewalk display" refrigerated cases.

Two 6-ft. cases, side-by-side, now make up the bottom of the store front, with two 3 by 2-ft. "see-through" plate glass windows framed above, in the event the customer wishes to look inside.

The two boxes, framed in tile brick, are devoted separate to fresh meats and sea foods, with standard fluorescent lighting and celluloid price tags, resembling the usual meat market found inside the store.

Popular fresh meats and seafood specialties are displayed during all selling hours at the front of the Tittle store, with double Thermopane

glass insuring protection against spoilage.

By use of an awning, which shields the cases from the direct sun during the few hours of the day when this is likely to occur, and with an additional 1/2-hp. in the condensing unit supplying refrigeration, it has proven possible to economically maintain cabinet temperature at 34° F.

The two display cases have proven effective "teasers" to bring shoppers inside, according to Tittle, and volume has increased by more than 50%.

Eldridge Will Manage G-E Service Center

LONG ISLAND CITY, N. Y.—E. W. Eldridge, Jr., has been appointed manager of the General Electric Co.'s Long Island City appliance service center, it has been announced by J. D. Phillips, supervisor of appliance service centers.

ACRMA Will Hold Section Meetings In Atlantic City During Show Week

Meetings Schedule

(All meetings at Hotel Chalfonte-Haddon Hall.)

MONDAY, NOV. 14

10 a.m.—Meeting of Small Compressor and Condensing Unit Section.

TUESDAY, NOV. 15

10 a.m.—Joint meeting of Room Air Conditioner Section and Self-Contained Air Conditioner Section.

Joint meeting of Large Compressor and Condensing Unit Section and Central Station Air Conditioning and Refrigeration Equipment Section.

WEDNESDAY, NOV. 16

11 a.m.—Meeting of board of directors of ACRMA.

Good News for JOBBERS!

POPULAR SAVAGE MERCHANDISERS Now Being Distributed Nationally



ONLY Two Models to Stock

Savage—famed as the manufacturer of Savage ice cream cabinets—makes two low-temperature merchandising cabinets, the M-9 (9 cu. ft. capacity) and the M-18 (18.7 cu. ft.). You select from a large assortment of full-color, 3-dimensional ice cream and frozen food photographs for installing in the cabinets, to suit your customers' requirements.

BIG Profit Opportunity In Expanding Market!

It's true! Savage Merchandising Cabinets, formerly big-sellers in a limited market, are now receiving national distribution, thanks to increased production. Here's a terrific chance for you to make extra profits by handling these well known merchandisers! You'll be backed to the limit by a vigorous advertising program in national trade papers.

HOW MANY Prospects Can You Think Of?

The market for Savage Merchandising Cabinets is expanding. Every retail outlet where ice cream or frozen foods are sold is a prospective buyer. Drug stores, confectioneries, grocery stores, supermarkets—even movie theatres, filling stations, etc.—recognize the value of these eye-catching merchandisers in increasing sales of ice cream and frozen food products.

START NOW To Get This Extra Business

You'll find undreamed-of profit possibilities in selling Savage merchandisers. Let us send you complete information. Simply mail the coupon today. Savage Arms Corporation, Refrigeration Division, Utica 1, New York.

MAIL COUPON NOW!

Refrigeration Division • SAVAGE ARMS CORPORATION UTICA 1, NEW YORK

Gentlemen: I am interested in learning more about Savage Merchandising Cabinets and profits to be made from selling them. Please send me all the facts.

Name _____

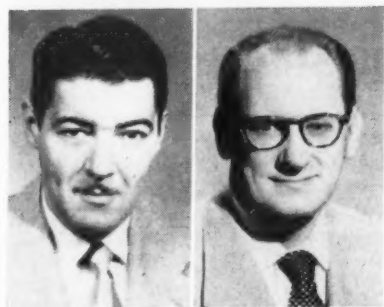
Firm Name _____

Address _____

City _____ State _____

SAVAGE
Double Duty
Merchandising Cabinets

In Pacific Coast Area



J. DOWNING

E. B. BARNES

Barnes, Downing Take Kelvinator Field Posts

DETROIT—Charles T. Lawson, vice president of Nash-Kelvinator Corp. in charge of Kelvinator sales, has announced two new executive appointments in the Pacific coast region.

The appointees are E. B. Barnes, as regional manager, and John Downing, as Los Angeles zone manager.

Barnes succeeds the late C. J. Bachman. He joined Kelvinator in 1936 in the advertising and sales promotion department at Detroit. In 1939 he was named district manager for New England, and in 1940 moved to Los Angeles as branch manager. Barnes has been zone manager there since October, 1945.

Downing entered the appliance field as a retail salesman in 1932. He joined Kelvinator as a district manager in Los Angeles in 1940 and in 1947 was appointed sales manager of the zone.

Distributor Bldg. Combines 3 Phases of Operation

FRESNO, Calif.—A complete new salesroom, warehouse, and service building is being completed here for the Leo J. Meyberg Co., San Francisco appliance distributor for more than 40 years.

The new building will be of steel and concrete block construction, with a total of 23,000 sq. ft. of floor space, according to Leo J. Meyberg, head of the firm. Costs are \$150,000.

Special features include two spur railroad tracks connecting with two major railroads, and a truck loading dock which will accommodate 12 trucks at a time.

Functions of the new warehouse and service center will be complete distribution for the entire San Joaquin Valley from Sacramento to Bakersfield.

New Jersey Appliance Store Opens Up In Larger Quarters

RED BANK, N. J.—A new modern salesroom has been opened at 25 Monmouth St. here by Atlantic Appliance Co., Inc., moving from smaller quarters it occupied for little more than a year at 77 Monmouth St.

Murry Connors is executive director of the firm, which handles Westinghouse, Admiral, and other electrical appliances and products. Connors also is secretary and treasurer of the corporation. Maurice Gallus is president and Emanuel Gallus is vice president.

Main offices and warehouse of the company are at 811 Railroad Ave., Asbury Park.

NAED Manual Analyzes Service, Installation Problems of TV Dealers

NEW YORK CITY—The television dealer's problem of installation and service has been carefully analyzed and presented together with many constructive recommended procedures in a comprehensive 16-page "Manual of Experience" published by the National Association of Electrical Distributors (formerly N.E.W.A.).

In announcing that the new television manual for dealers is now available to dealers and others in the industry, Charles G. Pyle, managing director, pointed out that this manual, which follows one prepared earlier for the association's members, deals with every important aspect of the subject. It is, to quote the introduction, "intended to act as a guide to prospective television receiver dealers."

Among subject headings in the manual are: selling the set—facts and pitfalls; dealer responsibility, factors affecting the service set up, direct dealer service, service company, liability, service problems, installation problems, multi-channel problems, and qualifications for technicians.

The manual was prepared under the direction of the association's service and repair parts committee.

The association announces that dealers and others in the industry may order their copies through the headquarters office. Copies are 25 cents each (prepaid). Address the National Association of Electrical Distributors, 500 Fifth Ave., New York City.

178,952 Freezers Sold In 7 Months

Electric Farm and Home Freezers—Complete—Sales by Sizes—Units

Farm and home freezers complete with high and low side and cabinet, where 50% or more of the net cabinet capacity is designed for the freezing and/or storage of frozen food.

JULY (28 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under..	1,838	...	28	1,866
2. 5.0 to 6.9 cu. ft.	4,166	...	107	4,273
3. 7.0 to 8.9 cu. ft.	7,274	...	79	7,353
4. 9.0 to 10.9 cu. ft.	3,788	...	3	3,791
5. 11.0 to 12.9 cu. ft.	7,354	...	11	7,365
6. 13.0 to 16.9 cu. ft.	4,484	...	9	4,493
7. 17.0 to 20.9 cu. ft.	1,620	...	1	1,621
8. 21.0 to 29.9 cu. ft.	69	...	...	69
9. 30.0 to 39.9 cu. ft.	154	...	...	154
10. 40.0 to 49.9 cu. ft.	2	...	...	2
11. 50.0 to 59.9 cu. ft. ....	...	...	...	...
12. 60.0 cu. ft. and over..	1	...	...	1
Total—All Models	30,750	...	238	30,988
13. Total Upright Models (included in above)...	746	...	3	749

FIRST SEVEN MONTHS (27-31-Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under..	10,563	...	855	11,418
2. 5.0 to 6.9 cu. ft.	22,781	...	606	23,387
3. 7.0 to 8.9 cu. ft.	40,112	1	650	40,763
4. 9.0 to 10.9 cu. ft.	14,743	...	32	14,775
5. 11.0 to 12.9 cu. ft.	38,398	...	97	38,495
6. 13.0 to 16.9 cu. ft.	29,226	...	70	29,296
7. 17.0 to 20.9 cu. ft.	18,143	...	43	18,186
8. 21.0 to 29.9 cu. ft.	1,020	...	...	1,020
9. 30.0 to 39.9 cu. ft.	1,569	...	...	1,569
10. 40.0 to 49.9 cu. ft.	12	...	...	12
11. 50.0 to 59.9 cu. ft.	1	...	...	1
12. 60.0 cu. ft. and over..	30	...	...	30
Total—All Models	176,598	1	2,353	178,952
13. Total Upright Models (included in above)...	8,608	...	35	8,643

Participating companies: Avco Mfg. Corp.; August G. Barkow Mfg. Co.; Beatty Mfg. Co.; Ben-Hur Mfg. Co.; Brewer-Titchener Corp.; Carrier Corp.; The Coolerator Co.; Deepfreeze Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint, Inc.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; Masterfreeze Home Locker Mfg. Co.; The Maytag Co.; Norge Div., Borg-Warner Corp.; Oregon Refrigerator Co.; Portable Elevator Mfg. Co.; Revco, Inc.; Sanitary Refrigerator Co.; Schaefer, Inc.; Emil Steinhilber & Sons, Inc.; Sub-Zero Freezer Co., Inc.; Victor Products Corp.; Westinghouse Electric Corp. (In 5-1-49); Wilson Cabinet Co., Inc.; Whiting Corp.; Ace Cabinet Corp. (Out 2-1-49); R. H. Bishop Co. (Out 1-1-49); Chapman Refr. Sales Co. (Out 1-1-49); General Refrigerator Corp. (Out 3-1-49); Seeger Refrigerator Co. (Out 3-1-49); Stoddard Mfg. Co. (Out 4-1-49).

Westinghouse Handbook On Refrigeration Aimed At Teachers, Consumers

NEMA Firms Sell 30,988 Freezers During July

MANSFIELD, Ohio—An "Electric Household Refrigeration" reference handbook and a fact folder that is a condensation of the book have been prepared by the Westinghouse Electric Corp. for teachers and consumers, it was announced here recently.

The handbook sells for five cents per copy and the fact folder is free.

In a foreword to the 32-page manual, Julia Kiene, director of the Westinghouse home economics institute said:

"This manual has been prepared to sum up the need for refrigeration, to explain how refrigeration units operate, and to give data that will allow you to choose and use refrigerators and home freezers in the most effective way."

The profusely illustrated book is divided into five sections. The first tells why refrigeration is needed. The second outlines the principle of refrigeration, the types available, and also defines numerous refrigeration terms.

The third section describes the construction and use of modern household refrigerators and refrigerator freezers. It tells how to choose the right type and size unit, where to put it, and how to take proper care of it.

The fourth section covers the same ground for home freezers. In addition, it gives simple instructions on the selection, preparation, and freezing of foods and tells how long they may be stored.

How to use frozen foods is covered in the final section as is a description of refrigeration beyond the home. A bibliography of refrigeration is appended.

NEW YORK CITY—More than 30,000 farm and home freezers were sold by 28 member companies of the National Electrical Manufacturers Association during July, the association reported recently.

The month's total of 30,988 was 9% ahead of June though far behind the 49,538 sold last year by 36 member companies.

All but 238 of the freezers sold in July were sold in the United States. A total of 749 upright models, included in the above figures, were moved.

Sales by Nema companies for the first seven months totaled 178,952 as compared with 282,951 for the same period last year. There were several more companies reporting last year, however.

As compared with June, sales gains were noted among freezers of from 5 through 8.9-cu. ft. capacity, from 11 to 16.9-cu. ft. capacity, and from 30 to 39.9-cu. ft. capacity. Fewer sales were made on units of less than 5 cu. ft., from 9 to 10.9 cu. ft., from 17 to 29.9 cu. ft., and above 40 cu. ft.

Nearly half of the month's sales were scored with freezers of from 7 to 8.9 cu. ft. and from 11 to 12.9-cu. ft. capacity.

The Challenge of twelfth-hour changes

There's a challenge in twelfth-hour changes—a challenge that Delco Products takes pride in meeting.

Delco Products' sense of responsibility extends far beyond the mere filling of orders. Each customer is regarded as a partner on a project. His individual needs are recognized . . . his problems solved through unstinting cooperation.

All of Delco's resources are geared to the tempo of today's manufacturing. Delco has the years of experience in the appliance field needed to combine quality and quantity production. Delco has the ability to work fast. And when occasion arises, Delco has the flexibility to make schedule changes without seriously breaking stride.

DELCO MOTORS

DELCO PRODUCTS

Division of General Motors Corporation, Dayton, Ohio

Sales Offices: CHICAGO • CINCINNATI • CLEVELAND • DETROIT • HARTFORD



Contractors Group Prepares for Annual Meeting Show Week

CHICAGO—All annual business and convention activities of the Refrigeration & Air Conditioning Contractors Association (formerly NARC) will be executed in a two-day meeting at its fourth annual convention at Atlantic City, Nov. 13 and 14. The Hotel Ambassador will be the official headquarters for all activities.

The entire first day, Sunday, Nov. 13, will be devoted to general business meetings, highlighted by a luncheon between morning and afternoon sessions, with an outstanding speaker and counsel from the Federal Trade Commission at Washington, D. C.—Robert B. Dawkins.

Keeping in mind two items of utmost importance to every refrigeration and air conditioning contractor, the general meetings have been designed to stress the importance of correct and carefully planned merchandising methods, and the art of effective salesmanship.

Monday, Nov. 14, will be devoted to the annual business of the association, with reports from the officers, directors, and committees, and the annual election of directors and officers. The board of directors will meet at a luncheon on this day also for a round-table discussion of future activities.

Members' meetings will adjourn in ample time to permit them to attend the opening of the All-Industry Exposition at 1 p.m. on Monday, Nov. 14.

Greater Store Lighting Factors Boom Comfort Cooling Market In L. A.

LOS ANGELES—Increased lighting factors in retail stores and the trend away from the "open front" type store have served to improve the market possibilities for air conditioning in the Los Angeles area.

This was reported by Charles E. Hollingsworth, district manager, Baker Refrigeration Corp., at the panel discussion on "Trend of Future Growth of Commercial and Industrial Refrigeration in Southern California" sponsored by the Los Angeles section of the A.S.R.E.

At one time the climate of southern California was held to be such that the cooling phase of air conditioning was not required in the Los Angeles area.

However, two main factors have brought about a change—and a trend towards increased use of air conditioning in stores. These factors are increased lighting loads, and public opinion.

Also, at one time many of the famed California supermarkets were open front type stores and in such stores, for obvious reasons, air conditioning was virtually eliminated from consideration.

However, currently the new supermarkets are all of the "closed front" construction with heavy interior lighting factors, and proprietors are realizing that a ventilating fan or desert cooler is not adequate enough to provide the kind of comfort the public is demanding, Hollingsworth declared.



See the New
Acme

EVAPORATIVE
CONDENSER

★
COOLING TOWER
AND OTHER

ACME PRODUCTS
AT THE

6th All-Industry Exposition

Nov. 14th to 18th—Atlantic City

Serving The
Refrigeration
Industry
Since 1919



★
ACME INDUSTRIES INC.
JACKSON, MICHIGAN
Representatives in principal cities

Program of RACCA Convention During Exposition Week

SUNDAY, NOV. 13

9 a.m. Open session—everybody welcome.

Call to order.

Welcome to Atlantic City.

Details of activities and entertainment planned—W. W. Farr, Cleveland, program chairman.

President's address—H. E. Wheeler, Chicago.

Announcement of appointment of convention committees and introduction of committee chairmen, Farr, program chairman.

"Return to Salesmanship," Harry M. Bowser, Education Department, Thomas A. Edison, Inc., West Orange, N. J.

Discussion.

"Air Conditioning Imagineering," C. S. Stackpole, vice president and general sales manager, Airtemp Div., Chrysler Corp.

Discussion.

12:30 p.m.—Luncheon, Renaissance Room, Ambassador hotel.

"The Anti-Trust Laws Concerning Access to Markets," Robert B. Daw-

kins, associate general counsel, Federal Trade Commission, Washington, D. C.

2:30 p.m.—Open session.

"Sales and Merchandising Needs for 1950," Irving B. Hexter, Industrial Publishing Co., Cleveland.

Discussion.

"Use Your Trade Association," R. M. Swisher, Chicago.

Discussion.

8 p.m.—Meeting of board of directors.

Open to interested members. A portion of the meeting will be devoted to consideration of proposed activities for the coming year and opinions of members will be welcomed.

MONDAY, NOV. 14

9 a.m.—Closed session, members only.

Call to order.

President's report to the membership—H. E. Wheeler, Chicago.

Committee reports:

Air conditioning—G. T. Rostock, Kansas City.

Codes, licensing, and safety—J. E. Perry, Detroit.

ASA B9 code—H. J. Prebensen, Chicago.

Finance—A. M. Palen, St. Paul. Legal—N. Edelstein, New York City.

Membership—E. S. Wright, Youngstown, Ohio. Labor relations—Harvey O. Miller, Chicago.

Trade Relations—Warren W. Farr, Cleveland.

Discussion on reports of committees.

Amendments to constitution and by-laws.

Report of nominating committee—F. J. Zoppel, Columbus, Ohio, chairman.

Discussion on report of nominating committee.

Election of directors.

Installation of directors.

Unfinished business.

New business.

Adjournment.

1 p.m.—Luncheon, for 1949-50 board of directors.

New Process To Join Big Aluminum Plates

COLUMBUS, Ohio—Development of a process which is claimed readily to join aluminum plates 1/8 in. to 3 in. or more thick at least four times faster than any previously-known means of equal quality has been disclosed by Battelle Memorial Institute here.

Working of the process, called "air-comatic," was explained as follows:

Filler metal in wire form is fed through a pistol-shaped welding tool at a controlled speed, the metal carrying the welding current. An arc is maintained between the end of the wire and the aluminum. The arc is surrounded by a sheath of argon or helium gas, preventing air from reaching the molten metal.

The process was worked out through research by Air Reduction Sales Co. at its laboratories in Murray Hill, N. J., and at Battelle here. According to Battelle, a private research organization, the process is expected to revolutionize industrial and job welding of aluminum.

WE'RE SAVING THE BIG NEWS FOR ATLANTIC CITY

6th All-Industry
REFRIGERATION AND
AIR CONDITIONING
Exposition
NOVEMBER 14-18

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Refrigerator Door Gaskets Are Again Made From Crude Rubber

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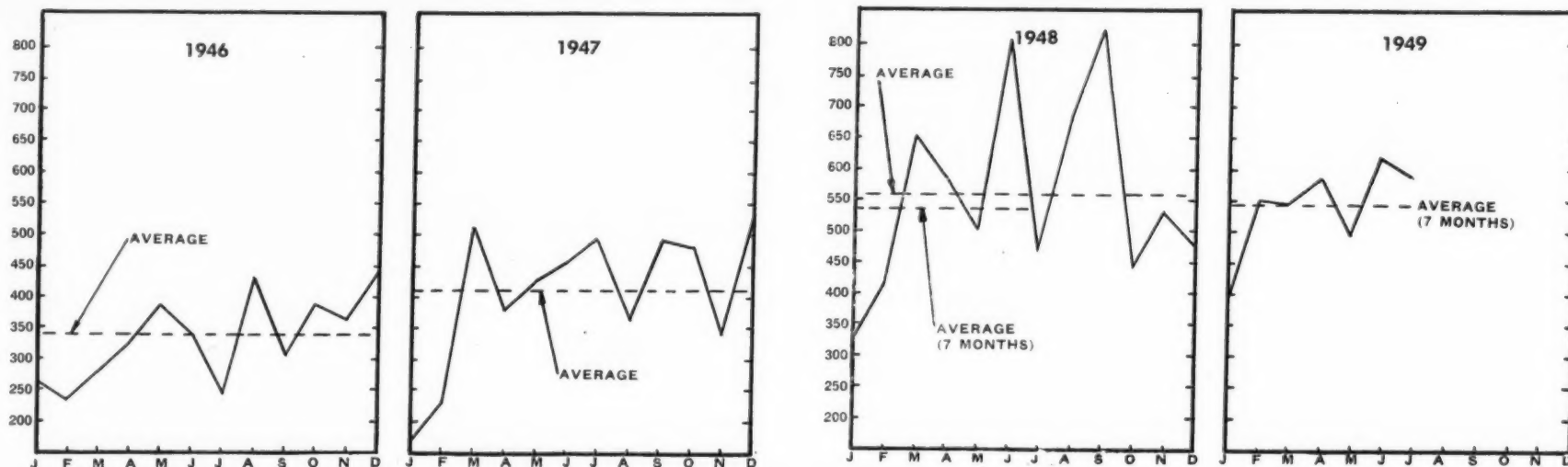
FREE—Your Copy of the 1949 AUTOMATIC CATALOG

AUTOMATIC'S new 164 page WHOLESALE Catalog is now off the press . . . yours on request! And, with it, you get our free price service, if you desire it. Write for your copy of the catalog now, on your business letterhead.

Automatic Heating & Cooling Supply

DIV. OF WEIL-MELAIN COMPANY
647 W. Lake St., Chicago 6, Ill.

First Reports of 1949 Chicago Commercial, Air Conditioning Installations Indicate Total May Exceed Last Year's Mark



THESE LINE GRAPHS OF CHICAGO COMMERCIAL SALES SHOW HOW VOLUME HAS GRADUALLY RISEN OVER FOUR-YEAR PERIOD.

CHICAGO—Those who believe that the potential market for commercial refrigeration and air conditioning has barely been scratched may find confirmation in the latest statistical data released by Gerald Gearon, supervising mechanical engineer of the Boiler and Refrigeration Inspection Department of the City of Chicago.

Continued gains are reported in Chicago for both commercial and air conditioning, as indicated in the accompanying tables.

Number of remote commercial condensing units installed in 1948 totaled

6,655 as compared with 4,863 in 1947; 4,058 in 1946, and 2,177 in a typical pre-war year, 1940.

Sales continued to increase in 1949, despite the "recession" which marked the early months of the year. For the first seven months the number of units installed was 3,769. The 1948 total for the first seven months was 3,733.

Air conditioning sales are likewise on the increase in 1949. In the first seven months of last year a total of 1,272 air conditioners and condensing units for air conditioning sys-

tems had been placed in operation. The same period in 1949 saw 1,353 units go in. The total for the full 12 months of 1948 was 2,012.

It is expected that the exceptionally hot summer of this year will put the 12-month total for 1949 well over the 1948 figure. As can be noted in the accompanying tabulation, installations this year were running behind corresponding months of 1948 until July. In July of this year 437 units went in, compared with 270 in July, 1948.

Included in the air conditioning figures are window air conditioners and console models from ½ to 2-hp., but the totals for these sizes are by no means complete.

All this statistical data is based on permits issued to installing contractors or owners in accord with the city code requirements, which, for example, do not require permits for window unit installations in private homes. Although incomplete, the data on these smaller sizes has been included in the air conditioning tabulations because it may be of some interest.

Commercial refrigeration data tabulated from this source and presented in accompanying tables shows the number of remote condensing

units installed by size for each month of 1947, 1948, and for the first seven months of 1949, plus a comparison of sales by make for 1948 and seven months of 1949, and a breakdown of contractors who installed remote units during the first four months of 1949.

The latter shows that 159 contractors in Chicago installed commercial units during the first four months. Of interest, also, is the fact that no one firm monopolized the field. The top firm in the group installed 146 units to take 7.6% of the business, while at the other end of the list are the 30 firms who installed only one each.

Approximately half of the total installations made during the four months, however, were put in by the 15 contractors, who represent just under 10% of all the contractors listed. The 107 contractors who installed nine units apiece or less represent 67% of the total firms. They divided 18.5% of the total units.

Data for air conditioning contractors is somewhat similar. Here a check was made for the month of July, 1949, and covered only those contractors who installed units of

(Continued on next page)

THE WORLD'S

leading appliance manufacturers are listed among Grand Rapids Brass customers. Because in building the

FINEST

products, in terms of quality and value, it is only natural that they select hardware for their

APPLIANCES

that will continue to look like new and function perfectly through long years of service — hardware which will

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such customer-attracting features as smart, modern designs, beautiful chrome-plated finishes, and locks with "Living Action" which assure easy dependable operation.

GRAND RAPIDS BRASS

will be glad to estimate your needs in commercial, domestic refrigeration hardware, stove hardware and nameplates for all kinds of appliances . . .

HARDWARE

that will give you and your customers assurance of satisfaction, outstanding quality and workmanship.

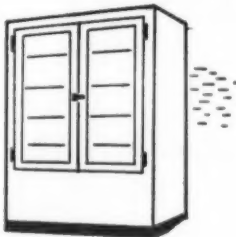
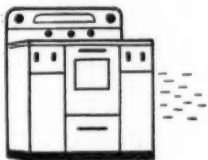
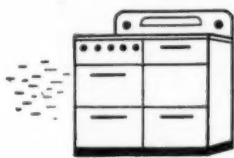
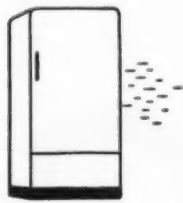
Manufacturers of hardware for COMMERCIAL REFRIGERATORS, DOMESTIC REFRIGERATORS, GAS STOVES, WASHING MACHINES, ELECTRIC RANGES

DIVISION OF CRAMPTON MANUFACTURING COMPANY

Grand Rapids Brass

COMPANY

GRAND RAPIDS 4, MICHIGAN



1947 Remote Commercial Installations by Size by Month

Month	½ hp.	¾	1	1½	2	3	5	Over 5	Total for Month
January	13	58	39	33	9	7	4	2	166
February	11	58	47	70	20	15	7	3	234
March	36	136	110	124	34	30	19	7	511
April	32	132	106	51	22	22	6	2	376
May	38	154	99	73	13	19	14	8	425
June	35	160	117	71	27	25	9	5	453
July	30	165	150	65	31	24	7	7	493
August	28	127	70	60	16	30	16	3	360
September	37	212	118	63	21	24	7	8	498
October	42	154	91	86	36	29	14	5	478
November	28	126	91	48	18	8	7	3	340
December	34	192	145	70	33	22	20	2	529
Total	364	1,674	1,183	814	280	255	130	108	4,863

1948 Remote Commercial Installations by Size by Month

Month	½ hp.	¾	1	1½	2	3	5	Over 5	Total for Month
January	61	115	57	34	18	12	7	6	319
February	146	121	40	33	15	10	5	3	404
March	265	184	85	50	22	17	8	6	649
April	272	151	57	47	29	12	6	4	586
May	178	142	86	43	23	9	5	3	505
June	330	199	135	79	21	24	3	4	808
July	183	114	60	47	19	14	4	1	462
August	230	198	117	65	30	25	2	5	674
September	324	205	111	75	46	35	10	3	817
October	141	107	58	65	25	23	3	1	433
November	163	141	75	60	42	24	9	5	532
December	158	123	77	48	27	25	4	3	466
Total	2,451	1,800	958	646	317	230	66	41	6,655

1949 Remote Commercial Installations by Size by Month

Month	½ hp.	¾	1	1½	2	3	5	Over 5	Total for Month
January	142	96	59	33	17	12	2	3	386
February	212	130	82	64	24	23	8	7	550
March	190	152	83	65	18	17	8	1	548
April	234	161	83	50	29	19	5	1	586
May	209	130	68	40	22	11	11	2	498
June	264	160	74	47	31	23	3	10	612
July	220	133	77	62	45	37	9	4	589
Total	1,471	962	526	361	186	142	46	11	3,769

How Chicago Contractors Shared Commercial Jobs First 4 Months, 1949

Rank	Total Units	Per Cent
A	146	7.6
B	131	6.8
C	84	4.4
D	81	4.2
E	76	3.9
F	72	3.7
G	51	2.6
H	47	2.4
I	45	2.3
J	45	2.3
K	41	2.1
L	40	2.1
M	36	1.9
N	35	1.8
O	30	1.6
P	28	1.4
Q	28	1.4
R	27	1.4
S	27	1.4
T	27	1.4
U	26	1.4
V	25	1.3
W	24	1.2
X	22	1.1
Y	19	1.0
Z	18	.9
AA	18	.9
BB	17	.9
CC	17	.9
DD	17	.9
EE	16	.8
FF	16	.8
GG	16	.8
HH	16	.8
II	15	.8
JJ	15	.8
KK	15	.8
LL	14	.7
MM	13	.7
NN	13	.7
OO	13	.7
PP	12	.6
QQ	12	.6
RR	11	.6
SS	11	.6
TT	11	.6
UU	10	.5
VV	10	.5
WW	10	.5
XX	10	.5
YY	10	.5
ZZ	10	.5
4 Installed 9 each		1.9
5 Installed 8 each		2.1
6 Installed 7 each		2.2
3 Installed 6 each		.9
8 Installed 5 each		2.1
17 Installed 4 each		3.5
12 Installed 3 each		1.9
22 Installed 2 each		2.3
30 Installed 1 each		1.6
		100.0

59 Contractors Shared July, 1949, A.C. Jobs

(3-hp. units or greater)

Standing	No.	Per Cent
A	20	7.5
B	18	6.8
C	16	6.0
D	15	5.6
E	10	3.7
F	9	3.4
G	9	3.4
H	9	3.4
I	9	3.4
J	8	3.0
K	8	3.0
L	8	3.0
M	7	2.6
N	7	2.6
O	7	2.6
P	6	2.3
Q	6	2.3
R	6	2.3
S	5	1.9
T	5	1.9
U	5	1.9
V	5	1.9
W	4	1.5
X	4	1.5
Y	4	1.5
Z	4	1.5
5 Installed 3 each		5.6
9 Installed 2 each		6.8
19 Installed 1 each		7.1
59	266	100.0

Top Contractor In Each Group Handled Less Than 8% of Early '49 Installations

(Continued from preceding page)

3-hp. or greater. Fifty-nine contractors installed 266 machines in the month. The top contractor garnered 7.5% of the total, while the top 12 firms, representing 20% of the total, installed 52% of the machines that month.

At the low end of the list 33 contractors (56%) installed 19.5% of the total in July, 1949.

Comparisons of the installations by "make" for both air conditioning and commercial are also interesting. For air conditioning a study was made of installations during July, 1949, in four popular sizes—3, 5, 7½, and 10-hp.

Here is shown that of the 245 units for that month, the leading make, "A", had 49, or 20% of the total; "B" had 42 for 17.1%; "C", 27 for 11%.

More complete data on makes is available in the commercial refrigeration statistics tabulated herewith.

Chicago A.C. Installations During July of 1949 Compared by Make

(3, 5, 7½, 10-hp. units only)

Make	No. Units	Per Cent
A	49	20.0
B	42	17.1
C	27	11.0
D	20	8.2
E	18	7.3
F	16	6.5
G	12	4.9
H	12	4.9
I	12	4.9
J	7	2.9
K	5	2.1
L	5	2.1
M	4	1.6
N	3	1.2
O	2	.8
P	2	.8
Others	9	3.7
Total	245	100.0

The breakdown covers all of 1948 and the first seven months of 1949, and so permits a study of the comparative ranking of the makes of commercial condensing units installed in the two periods.

Readily apparent is the fact that there has been little shifting in popularity of the various makes between the two periods. In 1948 there were 868 units of "A" make installed, while in the first seven months of 1949 this make ranked "B," or second. The second-place make in 1948—"B"—with 786 units, was just one behind second place in 1949. "C," third in 1948 with 663 units, is first thus far in 1949 with 476 machines.

The fourth-place make in 1948, "D," is retaining the same rank this year, as is make "E."

No make moved more than two places in the listings for the two periods. Ten makes moved up in rank while nine are running below their 1948 positions.

As for the month-by-month installations of remote commercial units, the tabulations for 1947, 1948, and 1949 show that the largest month was September of 1948, when permits were taken out for the installation

(Concluded on next page)

Commercial Sales by Make Reported In Chicago

1948		7 Months, 1949	
Make	Units	Rank	Units
A	868	B	431
B	786	C	430
C	663	A	476
D	617	D	427
E	508	E	259
F	489	H	200
G	479	F	255
H	474	G	251
I	252	J	135
J	212	I	161
K	202	K	113
L	147	L	110
M	139	M	70
N	116	O	40
O	98	N	45
P	92	P	29
Q	75	S	22
R	60	Q	25
S	51	U	13
T	37	R	24
U	22	T	19
V	19	X	4
W	13	V	10
X	11	Y	3
Y	8	W	6
Z	6	Z	....
Others	211	Others	211
Total	6,655	Total	3,769

This is one of a series of advertisements outlining the advantages of "Freon" refrigerants

WHY "FREON" REFRIGERANTS ARE WIDELY PREFERRED

OUTSTANDING CHARACTERISTICS OF "FREON" REFRIGERANTS

- NONTOXIC
- NONFLAMMABLE
- NONEXPLOSIVE
- NONCORROSIVE
- ANHYDROUS
- PURITY
- QUALITY
- ACID FREE
- NARROW BOILING-POINT RANGE
- AVAILABILITY

TODAY—greatly expanded production facilities provide full assurance of ample "Freon" for every need. Modern plants—strategically located—make possible the rapid delivery of practically any quantity of "Freon" to meet these needs. This availability of safe refrigerants is still another reason why more and more new air conditioning and refrigeration installations are being designed to use "Freon."

"Freon" refrigerants are as pure as modern scientific methods of manufacture can make them. In each Kinetic plant, standard laboratory-controlled processes are followed to maintain purity and high quality . . . characteristics vital to the efficient and economical performance of modern air conditioning and refrigeration systems.

Furthermore, "Freon" refrigerants are safe, nontoxic, nonflammable, nonexplosive, odorless, nonirritating. These refrigerants are classified among safe refrigerants listed in Group 1 of the A.S.A. B-9 code. That is why "Freon" refrigerants are widely preferred.

There is a "Freon" safe refrigerant suitable for every commercial, industrial and household refrigeration or air conditioning purpose. Engineers and manufacturers unhesitatingly recommend equipment designed for these refrigerants.

Kinetic Chemicals, Inc.
Tenth and Market Sts., Wilmington 98, Del.



FREON SAFE REFRIGERANTS

"Freon" is Kinetic's registered trade-mark for its fluorinated hydrocarbon refrigerants

E-Z-SEE LIQUID INDICATORS

Now available in three end connections: male flare, female X male flare, and O.D. Sweat . . . in sizes 1/4", 3/8", 1/2".

The 100% answer to the industry's demand for a foolproof, safe, liquid indicator. Positively leak-proof and . . . E-Z to see through.

One end female flare for direct attachment to drier.

Sweat connections—permit soldering without disassembly.

Literature and Prices on Request.

REMCO INCORPORATED
ZELIENOPLE, PA.

By End of July '49 Air Conditioning Was Selling at Faster Rate Than 1948 Period

Chicago Air Conditioning Sales In 1948, 1949

Size (Hp.)	1948		First 7 Months, 1949	
	No. Units	Total Hp.	No. Units	Total Hp.
1/2*	96	48	64	32
3/4*	380	285	336	252
1*	14	14	38	38
1 1/2*	68	102	16	24
2*	20	40	18	36
3	224	672	178	534
5	759	3,795	448	2,240
7 1/2	98	735	76	570
10	98	980	56	560
15	60	900	33	495
20	31	620	18	360
25	50	1,250	17	425
30	22	660	11	330
40	22	880	20	800
50	32	1,600	7	350
60	2	120	6	360
75	7	525	.....	.....
100	5	500	.....	.....
Over 100	24	17,875	11	15,025
Total	2,012	21,601	1,353	12,431

*Data on the smaller size air conditioners is by no means complete. Permits are taken out to cover the installation of such units only under some circumstances, all residential installations being exempt.

†Includes a 105-hp. machine, 110, 150, four 200's, a 215, two 225's, a 235, three 250's, 290, three 300's, 400, two 450's, a 470, a 1,000, and a 1,100-hp. machine.

‡Includes a 125-hp. machine, 160, two 200's, a 290, 300, 350, 400, 600, and two 1,200-hp. units.

(Concluded from preceding page)
of 817 units. Almost as large was June of the same year, with 808 units.

Of the three periods the lowest month was a mere 166 units installed in January of 1947. January was also the low month in 1948, as would be

expected, but this figure—319—was nearly double the same month of 1947. January of 1949 also gained over 1948, a total of 386 units being installed.

Monthly variations in number of installations is depicted in the accompanying line graphs, which show

Chicago Air Conditioning Sales Gaining In 1949

Month	1948	1949
January	41	61
February	76	64
March	101	80
April	178	159
May	252	210
June	354	342
July	270	437
7 Months	1,272	1,353
August	371	.....
September	210	.....
October	65	.....
November	49	.....
December	45	.....
Total	2,012	.....

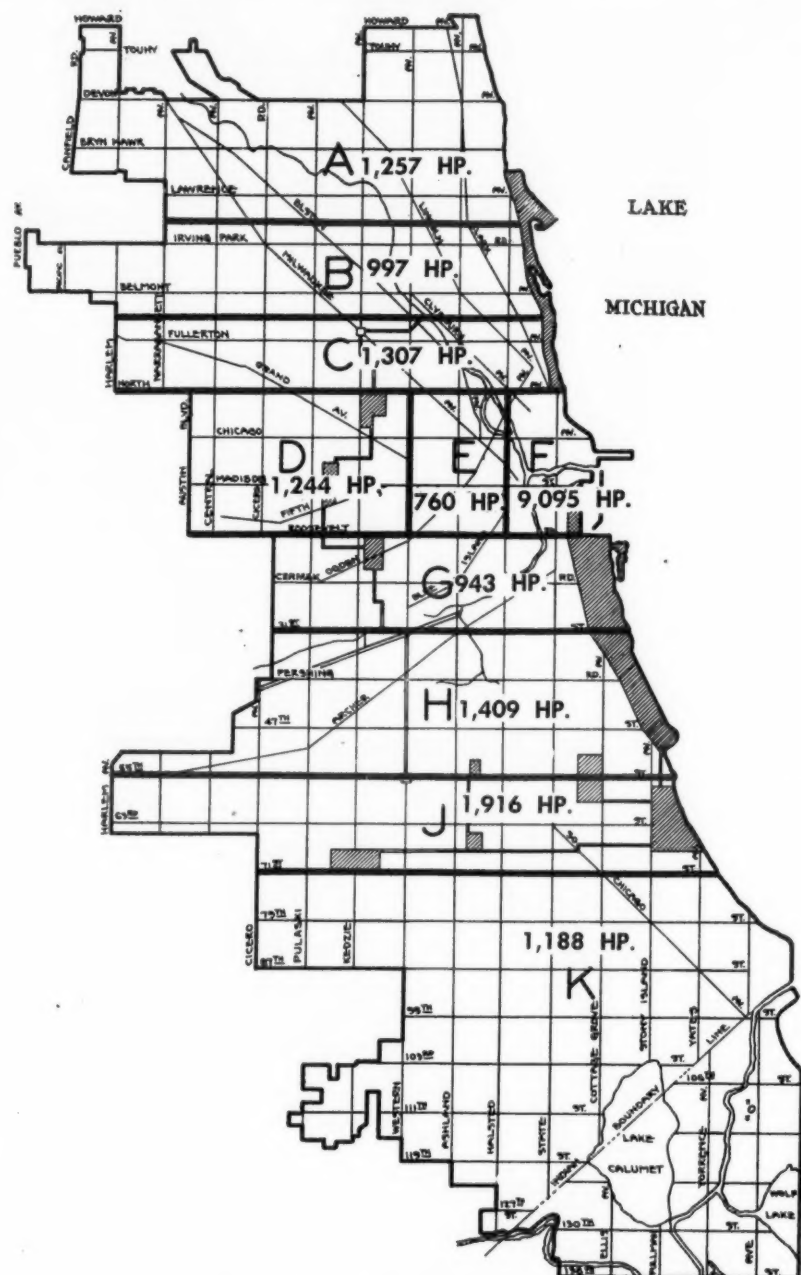
the trend for 1946 as well as the three following years. How the monthly average of installations has been increasing over this period is also indicated in these graphs.

Comparison of the various sizes of condensing units installed is made in the breakdown of data for 1947, 1948, and 1949. The smaller sizes naturally predominate. In 1948 there were 2,451 units of 1/2-hp. and 1,800 of 3/4-hp. of the 6,655 total for the year.

The first seven months of 1949 show 1,471 1/2-hp. units and 962 3/4-hp. units out of the 3,769 total. In 1947, however, the table shows that the 1/2 and 3/4-hp. sizes were the leaders with 1,674 and 1,183 installations, respectively, compared with only 364 1/2-hp. units.

Sizes of air conditioning machine installations are given in another table that covers 1948 and the first seven months of 1949. In number of units the 5-hp. size is well in the lead. During 1948 there were 759 conditioners or condensing units for

Downtown Chicago Gets Most Cooling



Just about half of the total air conditioning (as rated in horsepower) that was installed in the city of Chicago during 1948 went into the downtown area, which includes the famous "Loop." Note in the above map of Chicago that section "F" (downtown) had 9,095 hp. of air conditioning installed last year. Second in total horsepower was the narrow strip "J" with 1,916 hp. This includes 63rd St., which is the heavily concentrated retail business and amusement center for the South Side.

air conditioning of this size installed. The 1949 figure shows 448.

Grand total for 1948 was 2,012, counting the machines smaller than 3-hp. Although figures for 1/2, 3/4, 1, 1 1/2, and 2-hp. air conditioners are included, they are thought to be incomplete, as previously explained.

A considerable number of large machines (100 tons and over) were noted in 1948 and 1949. An interesting fact here is that most of the heavy machines were installed (at least permits were taken out) in the late fall or early winter months. This might indicate that the big jobs are planned well in advance, and are

installed during the slack season.

An interesting study was also made of the geographic distribution of air conditioning within the city of Chicago. Half of the connected horsepower installed during 1948 was concentrated in the relatively small downtown area, designated as "F" on the accompanying map. In this section, which includes the famous "Loop," a total of 9,095 hp. of air conditioning was installed last year.

In second place, but far behind, was section "J" with 1,916 hp. This section includes 63rd St., the heavily concentrated retail and amusement center for Chicago's vast South Side.

MULTIPLE CARTONS mean MULTIPLE PROFITS

at no extra cost to you!

BECAUSE

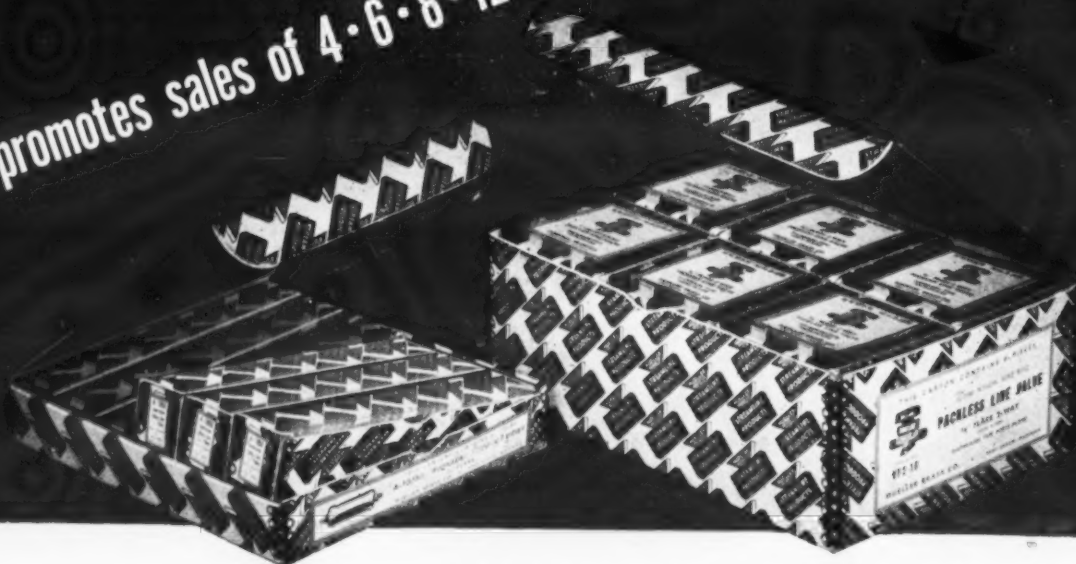
assures original quantities

saves time and handling

provides neater stocks and improved inventory control

carton within a container assures a clean, dust-free product

promotes sales of 4-6-8-12 items at one time



order from your wholesaler **MUELLER BRASS CO.**

PORT HURON, MICH.



Double-Duty Performance
SELLS!



There is a ready market for WARREN Model-OM open refrigerated displays. The OM is a quick-selling case for meats or dairy products. With the separate canopy top, it does double duty as a display for tie-in products that do not need refrigeration. Franchises are available in some territories.

THE WARREN COMPANY
INCORPORATED
P. O. BOX 1436 ATLANTA 1, GA.

Packaging Centers For Self-Serve Meats Seen by Kroger Head

NEW YORK CITY—Joseph B. Hall, president of the Kroger Co., believes that before long, fresh meats will be packaged at central points.

"Cutting and wrapping in the store has been necessary up to the present time," he said at the recent annual convention of the American Meat Institute. "But I predict that our fresh meats will be packaged at a central point by your organizations, just as you are packaging many of your other products at the present time."

"When the time arrives—and it is not too far distant—you will have brand identification on the consumer package, and the quality of your products and the cutting methods used will be as important to you as they are to us at the moment."

Turning to the subject of quick-frozen meats, Hall pointed out that it is not known how rapidly they will develop.

"Recently," he stated, "we have seen a reversal of the trend in connection with poultry. Tray-packed, pan-ready, cut-up fresh chickens are outselling the quick-frozen product."

"Quick-frozen cuts of meat—rolled roasts, steaks and other items—have not sold well in competition with fresh-cut, wrapped meats in self-service. Improvement in quality of the frozen product and equipment

(Concluded on Column 5, this page)

Rema's President Issues Invitation to All-Industry Show

As president of the Refrigeration Equipment Manufacturers Association, sponsors of All-Industry Refrigeration and Air Conditioning Expositions, I would like to take this opportunity to extend a most cordial invitation to everyone in all phases of our industry to attend the Sixth All-Industry Refrigeration and Air Conditioning Exposition to be held Nov. 14 to 18 inclusive, 1949, at Atlantic City, N. J.

Never before have so many completely new and improved designs covering all types of commercial refrigeration and air conditioning equipment been readied for introduction at any Industry Show. There will be new condensing units, new coil designs, new automatic control equipment, valves, and accessories, recently completed and being shown for the first time.

More exhibitors will show their new and novel products at the Sixth All-Industry Show than ever before. We have had big shows in the past, but never so many exhibitors and never so widely diversified in scope. This will be the most all-inclu-



K. B. THORNDIKE

sive Refrigeration and Air Conditioning Show ever held.

Whether you are a manufacturer, wholesaler, serviceman, contractor, dealer, distributor, engineer, or architect, you cannot afford to miss seeing first-hand and learning about the many products which will be exhibited. By attending, you will fully realize why ours is one

of the fastest growing major industries and why it has a brilliant future.

Atlantic City will be the meeting place during the week of the Show for the leaders of our industry. You will find everyone there. You will be able to talk with the men who have conceived and designed all these new products.

In addition to being able to see the best show ever, Rema is providing excellent entertainment. On Monday, the first night of the Show, Rema will stage an All-Star Revue in the huge Auditorium. Every member of the industry who has registered will be admitted to this marvelous revue as a guest of Rema. Other entertainment is being provided on Wednesday and Thursday nights.

I believe that everyone who attends the Atlantic City Show with all its diversification will take back home some very valuable information. Again, I cordially invite you and urge you to attend.

K. B. THORNDIKE, President,
Refrigeration Equipment
Manufacturers Association

Packaging Centers--

(Concluded from Col. 1, this page)

needed to protect this quality may reverse this trend.

Hall stressed that proper quality and meat-cutting methods are of special importance in self-service meat stores.

"A dissatisfied customer has no one to whom to complain," he said. "She just does not come back. Proper control of freshness becomes all-important."

Continuing, he noted that the trend to self-service meats is accelerating and that it has had consumer acceptance. Self-service meats, he asserted, have resulted in a higher volume of meat sales to total store sales. But, he warned, "greater emphasis on quality and cutting methods is needed."

James Cooke, general manager of the Penn Fruit Co., another speaker, described self-service merchandising of foods as the greatest advance in the industry in 25 years. But he said he was disturbed by the number of consumers who do not like this method.

Cooke listed three main objections to self-service as uncovered by a survey made under the direction of his company:

1. The merchandise was not fresh or did not appear so.

2. Excessive waste was apparent in the package or was discovered later.

3. Cuts were not satisfactory as to size, types, or thickness.

Self-service, he said, is the only method of doing "really big volume in the few concentrated peak hours of supermarket retailing."

See the Koch exhibits, Booths 350 and 352, at the All-Industry Refrigeration and Air Conditioning Exposition in Atlantic City, November 14 to 18.

Here's proof that the Koch line includes a unit for every retail refrigerator need. And other new models are coming . . . to make the line even more complete. Remember, in every city block, there's a prospect for one or more of these quality KOCH cases.

KOCH
Refrigerators
NORTH KANSAS CITY 16, MO.
Since 1883

WRITE TODAY FOR AVAILABLE TERRITORIES AND THE COMPLETE KOCH PROPOSITION

PREVIEW!

On these and other pages throughout this issue the NEWS presents a "preview" of some of the exhibits scheduled for the Sixth All-Industry Refrigeration and Air Conditioning Exposition, thus affording readers the opportunity of "spotting" various displays in which they may have a particular interest.

'New Beer Dispensing Technique' To Be Shown

The premier showing of "an entirely new development in modern beer dispensing technique" is due to be staged by La Crosse Cooler Co., which will also introduce formally its "Hi-Boy" ice cream mix cooler.

The new feature, the company claimed, "will completely fulfill a need which has long been felt in the beverage dispensing field."

In addition to the ice cream mix cooler, new products to be exhibited are the La Crosse "Bluebird" bottled beverage cooler, glass chiller, and "Economy" pre-cooler. Other products that will be on display are the company's ice cube maker, direct draw dispenser, and a bottle beverage cooler, all reportedly incorporating new features.

The Bluebird beverage cooler is described as an innovation in low-type coolers for under-bar installations demanding a fixture of limited height. It is said to be especially adaptable to restaurant application, being only 33½ in. in over-all height and offering "remarkable" capacities in three sizes. It also features "something new" in a sliding door and back shelf arrangement.

Component Working Display Planned by Bell & Gossett

A working display of the Bell & Gossett complete line of refrigeration components will dress up the company's booth at the All-Industry Exposition, Frank C. Hackett, sales promotion manager, reported.

On display will be chillers, condensers, heat exchangers, and centrifugal pumps. In addition there will be such hot water heating specialties as pumps, flow-control valves, motorized valves, and relief and reducing valves.

Hackett said the company will also exhibit plastic miniature houses showing radiant heating installations.

'Heat Pump' Apparatus To Show American Brass Parts

A machine designed expressly to show the heat transfer properties of copper will highlight the American Brass Co. exhibit. This equipment embodies the "heat pump" principles of direct and reverse-cycle refrigeration and includes coils, tubes, pans, and convectors of copper, as well as vibration eliminators of bronze.

Dehydrated refrigeration tubes with

cup-sealed ends, swaged tube products, bent, half-round copper and aluminum tubes plus other products of the French Small Tube Branch of the American Brass Co. will be displayed. Among other items to be shown are the general line of Anaconda copper water tubes and wrought copper solder-type fittings.

Visitors to the American Brass booths will also have a chance to view new cartons and dealer sales helps included in the company's new merchandising program.

In attendance will be: Phillip A. Coleman, Fred W. Green, Merton B. Allan, W. Harold Dowd, Henry Voegel, and Donald S. Granniss.

Low-Temperature Units In Brewer-Titchener Lineup

Display cases, food freezers, and evaporator plates, incorporating new technological and merchandising advances, will be unveiled by the Brewer-Titchener Corp. at the 6th All-Industry Refrigeration and Air Conditioning Exposition.

Highlighting the Brewer-Titchener exhibit, which will be located in booths 418 and 420, will be the firm's line of portable display cases, including model DC-6-2D for frozen foods, model DC-6-2L-D for ice cream, and model DC-6-2D-DBD for dairy products.

In addition, a 12-cu. ft. display case, model DC-12-2D; a home freezer, model FC-6; and samples of the company's cross-flow evaporator plates for special installations will be lined up for inspection.

Four representatives of the Brewer-Titchener Corp., C. H. Beans, Fred Ellis, James Cox, and James Florence, will be present.

U.S. Airco To Spring 'Amazing' New Product

United States Air Conditioning Corp. reports that it will unveil an "amazing" new product at the exposition.

"Our secret is one which we believe will rock the industry," the company declared flatly. "It's revolutionary, it's practical, it's versatile."

The new product will be among the company's 1950 models of packaged refrigeration units on display in booths 138 and 140. These include the store conditioner, the console room air conditioner in a blonde mahogany cabinet, the ½-ton window unit, the "Refrigerated Kooler-aire," and "Modu-aire"—the individual room unit for multi-room buildings.

Company representatives will reveal the 1950 sales program with its "new and different" features.

Place of Ultra-Violet Lamp Will Be Shown

What place does ultra-violet light have in the refrigeration industry? Can ultra-violet be used as a leak detector in refrigeration systems?

Ultra-Violet Products, Inc., which ferrets out new uses for ultra-violet, promises that these questions will be answered at its booth. The display, it was stressed, "will be interesting and educational, an example of technological advancement in the refrigeration industry."

The company pointed out that recognition of adverse effects of low temperatures on germicidal lamps prompted it to develop a unit that withstands temperatures of 30-40° Distribution, it noted, is being pushed through wholesalers of refrigeration parts and supplies.

Automatic Products Display To Show Application

Automatic Products Co. will exhibit several entirely new products for the first time. But you'll have to go to booths 242, 244, and 246 to find out what they are, for the company is releasing no pre-show information about them.

Main point of interest in the display will be the company's two types of thermostatic expansion valves, liquid-charged and pressure-limiting. A working model intended to demonstrate the reliability of the liquid-charged expansion valve will be one focal point of attraction.

Another will be a display showing "versatility of application" of AP's

new expansion valve for large commercial and unit air conditioners. This valve, the company claims, "is the only one on the market that can be converted from an equalizer to a non-equalizer valve on the job."

"With a wide range of 'Equa-flo' distributors, this valve becomes adaptable for every conceivable type of application in a capacity range from 3 to 11 tons."

Supplementing the special showing of these products, Automatic Products will display a complete line of automatic and thermostatic expansion valves, liquid and suction line solenoid valves, suction pressure regulating valves, its complete line of new model 65 water regulating valves with the positive V-block stem seal, and a complete line of refrigerant filters and driers.

R. W. Johnson, president; E. A. Vallee, executive vice president; D. Albright, laboratory engineer; D. Moerick, sales manager; and B. T. Carroll, J. W. Hall, F. J. Marshall, T. J. Melville, A. L. Neva, R. E. Petersen, L. C. Thompson, and H. D. Youmans, sales representatives, will attend.

Standard Will Feature Replacement Evaporators

Up for inspection in the space occupied by Standard Refrigeration Co. will be its complete line of new stainless steel evaporators for replacement or original equipment.

Also on display will be Standard's complete line of shell and coil, as well as counter-flow, condensers.

3-Hp. Residential Cooler In General Refrig. Exhibit

A 5-hp. package air conditioner which has been completely redesigned for 1950, a new 3-hp. residence cooler, and a new combination air and water-cooled condensing unit will be shown by General Refrigeration Div., Yates-American Machine Co., in booth 616.

Designated the GR-520, the 5-hp. package air conditioner will be running "to demonstrate the quiet operation and the effectiveness of the extra large five-row cooling coils," the company reported.

The residence cooler (H-349), an item just added to the Lipman line, is designed to operate through the blower system and ductwork of a warm-air furnace. The combination condensing unit will be displayed for the first time.

A special folder for distribution only at the show and of interest to service engineers will be prepared.



FREEZERS

"Built Like A Battleship"

JUST WHAT YOUR CUSTOMERS WANT

Full-opening, counterbalanced lid . . . Smooth, streamlined exterior . . . Quiet, efficient operation . . . Strong, durable construction . . . Abundant zero storage and freezing space

5-YEAR FOOD WARRANTY • 5-YEAR PROTECTION PLAN

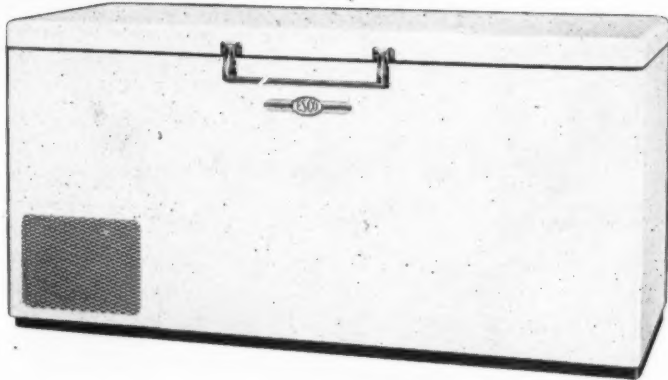
Illustrated is Model CL-16 (16 cu. ft.) with full-opening lid—same as but longer than Model CL-12 (12 cu. ft.).

A Size For Every Customer - 10 to 40 Cu. Ft.

You are cordially invited to visit

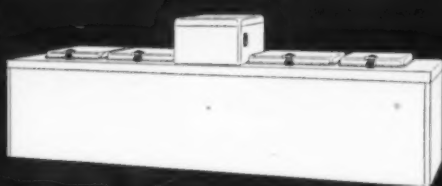
THE ESCO EXHIBIT
Space Nos. 334-336

All-Industry Show in Atlantic City

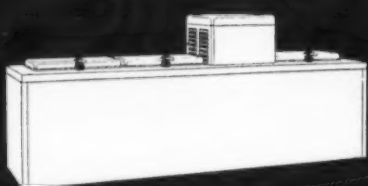


ESCO Cabinet Company, West Chester, Penna.

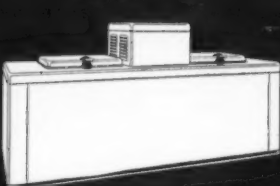
Model M-40
(40 cu. ft.)



Model M-32
(32 cu. ft.)



Model M-24
(24 cu. ft.)



All equipped with Air Blast Fast Freeze Fan and Signal

A PROFITABLE LINE TO SELL

Visit HUSSMANN Booth 829 at All-Industry Exposition

THE SATISFACTION
LINGERS ON...
WITH
HUSSMANN
EQUIPMENT



A good Refrigeration Man puts his best, sincerest effort into every job. Then, when he's finished, he goes on his way—entrusting his reputation to the performance of the Equipment.

The high quality construction and scientific engineering built right into every HUSSMANN Product assure satisfactory performance! HUSSMANN won't let you down!

HUSSMANN
REFRIGERATION, INC.

HUSSMANN BUILDING • ST. LOUIS 6, MO.

RUDDY FREEBORN CO., LTD., BRANTFORD, ONT., HUSSMANN CANADIAN SUBSIDIARY

Industry Show Will Mark Introduction Of Many New, Redesigned Products

Ideal Draft Beer Cooler Has Glass Chilling Area

Ideal Cooler Corp. will introduce two "novel" pieces of equipment as well as show its conventional draft and beverage coolers—all products featuring Ideal's new "Arctic-fin" evaporator.

One of the new items is a draft beer cooler that includes a glass-chilling compartment. The other is a three-temperature restaurant cooler with either water cooling or a 12-cu. ft. frozen food compartment. The latter is designed particularly for restaurants where space is limited and drinking water, beverages, and food are kept in one fixture.

The company explained that the Arctic-fin evaporator, while maintaining a secondary surface the same as any other fin coil, "still does not take up more space than 5/8 in. of tubing."

Observed Louis Weiss, president: "It is the first time in refrigeration history that you can eat your cake and have it, too."

Refrigeration Sales Corp. Shows Cube Maker & Bobtail

The Brewer-Titchener Corp. ice cube maker with "outside entrance" cube storage compartment and the Phenix bobtail unit will be placed on view at the Refrigerated Equipment Sales Corp. booth.

The ice cube maker contains 24 trays that will make 336 large cubes at one freezing. The storage compartment will hold the production of one complete freezing. The unit is claimed to freeze faster than other units of a similar type.

Henry To Demonstrate '545' Diaphragm Relief Valve

Henry Valve Co. will demonstrate its new Type 545 diaphragm relief valve with a built-in replaceable ruptured disc at the 6th All-Industry Refrigeration and Air Conditioning Exposition.

This new valve is used with "Freon." Factory tests show that it will operate on "Freon" installations with a minimum deviation from set pressure that is considerably less than the customary 5% permitted under the ASA-B9 Code.

Coolstream To Give Away Cooler with Order for 5

If you're a dealer, you might get a water cooler for free at the show.

Coolstream Corp., which is celebrating its fifth birthday, announces that it is going to mark the occasion by giving one cooler free to every dealer at the Exposition who orders five coolers. The offer is limited to one order per dealer.

On display in the Coolstream space will be five new models. Four of them make up a new line of refrigerated compartment-type coolers, and the fifth is a compact, packaged assembly bottle-type cooler.

There are two models of bottle-type compartment coolers and two models of the pressure-bubbler type compartment units. All models have a single, large door that permits the insertion of quart bottles without tipping. The refrigerated space is over 1 cu. ft., and the compartment is made of stainless steel.

Both bottle as well as pressure coolers will be shown with and without ice cubes. The models with cubes have two quick-release trays of large cubes totaling 4 lbs. per freeze.

The pressure-bubbler models have a stainless steel top and a connection for a glass filler. The doors have self-closing locks with keys.

Coolstream calls its packaged assembly bottle-type cooler "an innovation in water cooler construction." This model, CBS-3-50, has a stainless steel evaporator and hermetic unit which together form a close-coupled package that can be removed from the cabinet by loosening four nuts and bolts.

According to the company, the compactness of this assembly permits the use of the lower half of the cabinet as a storage compartment with a door for an extra bottle of water, drinking cups, and waste cups. There is an opening in the cabinet for the waste cups.

Kinetic Will Stress Improvements of 20 Years

The Kinetic Chemicals, Inc. exhibit will stress the improvement in refrigerants over the past 20 odd years. Twenty years ago the lack of a satisfactory refrigerant hampered the progress of the air conditioning and refrigeration industries.

A research program was instituted to find the "ideal" refrigerant. The result of this study was a series of new compounds specifically designed for use in the refrigeration industry.

These "Freon" refrigerants not only met the exacting requirements of the air conditioning and refrigeration industries but they also met the most stringent specifications of the various safety codes applying to these industries.

Self-Service Gets Emphasis In Federal's Exhibit

Special emphasis will be placed on self-service equipment in the Federal Refrigerator Mfg. Co. display booths, 708-10, this year. In fact, the Exposition will mark the first formal showing of the firm's new series 4000 cases, latest additions to the line.

The new series will include the models 4107M and 4007M for packaged meats, the 4007V for vegetables and produce, and the 4007D for dairy products and beverages. All cases feature forced circulation of air, massive mirrors to enhance the products displayed and slim-line lighting.

The meat cases are available in single or double duty, with or without mirrored superstructure. They can be used for wall installations, in line with closed meat cases, or for island display. When used in line with other meat cases, the canopy is removed and the units loaded from the rear.

Other attention catchers in the booth will be an open self-service frozen food display case and one of

Federal's triple-deck merchandiser self-service commercial dairy display cases.

Company personnel on hand at the booth will be: John Romadka, president; R. J. Loudon, vice president; A. T. Mickle, sales manager; and Sales Representatives Kenneth C. Milford of Baltimore; Bernard M. Packtor of New Haven, Conn.; G. C. Rind of Cleveland; and M. E. Sitton of Tampa, Fla.

Jarrow Will Feature 90° 'Speed Angle' Notcher

Several new additions to the Jarrow line of refrigerator door gaskets designed for replacement purposes and a complete new line of heavy-duty freezer and cold storage door gaskets will be arrayed in the Jarrow Products booth at the All-Industry Exposition.

Feature items will include the fixed 90° "Speed Angle" door gasket corner notch and the new variable angle notch, capable of cutting notches from 22½ to 90° for use in gaskets having curved corners.

Jordon To Show More Than A Dozen New Models

The largest and most complete exhibit in the history of the Jordon Refrigerator Co., Inc. will be set up in booths 722, 724, 821, and 823 at the All-Industry Exposition.

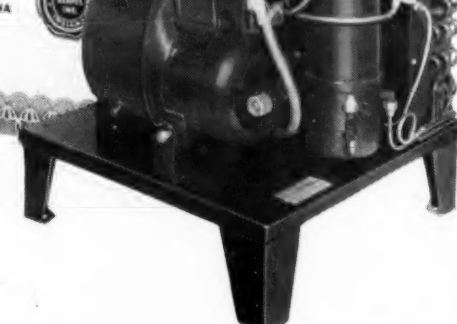
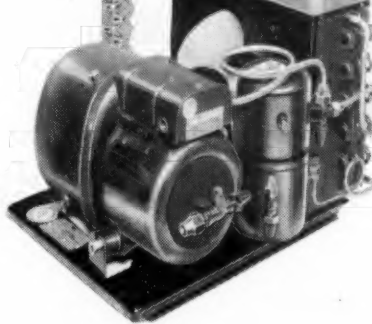
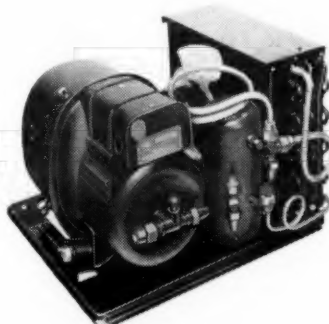
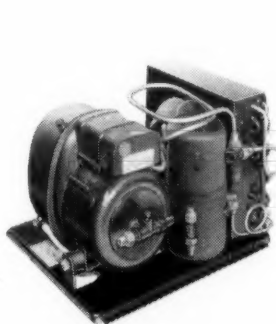
More than a dozen of entirely new units will be displayed in addition to many Jordon standard models. Featured models will include open self-service meat cases, open self-service frozen food cabinets, an entirely new design in three-shelf dairy cases, new counter-top display cases, and a new line of stainless steel reach-in refrigerators.

Sliding door frozen food merchandisers, under-bar beverage coolers, double-duty display cases, and two-temperature reach-ins will also grace the exhibit.

Jordon representatives on hand will include Frank Fogel, president; Harry Fogel, vice president; Robert J. Duffy, sales manager; Alfred Levin, advertising and sales promotion manager; and John E. Mack, of the sales division.

AT THE ALL-INDUSTRY EXPOSITION:

See
Servel
SUPERMETIC



and check the sensational profit-building 5-Year Protection Plan!

Make the Servel Booth at the All-Industry Exposition a "must" on your schedule. See the superior design and rugged construction of Servel Supermetics that make possible a *real* 5-Year Protection Plan.

Check our operating models and prove to yourself the many profit-making features such as the Servel "force-feed" lubrication system that completely and constantly protects vital working parts . . . compact, space-saving design that fits any commercial refrigeration or air conditioning requirement. See how installation costs are reduced by Supermetic's fully connected control accessories. Listen to its quiet, smooth-running performance.

You'll be able to get all the facts on the great, new Servel 5-Year Protection Plan . . . the most workable plan in the industry. It's the plan that will make your product easier to sell . . . increase dealer sales . . . assure better service to users, build good will for your products. It eliminates the cost of handling parts for manufacturers.

Plan to stop in early. You'll find you will want to spend a lot of time with Servel . . . see and hear the story of the greatest plan that ever hit the refrigeration industry. Servel, Inc., Electric Refrigeration Division, 1910 Kentucky Ave., Evansville, 20, Indiana.

See Servel Supermetics
at Booths 456-458; 555-557
at the All-Industry Exposition,
Atlantic City,
November 14-18.

Servel
SUPERMETIC

designed for every electric refrigeration and air conditioning requirement . . . 1/4 through 3 h.p.

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

conduct and because no civil suit by an injured party can be brought under Section 303 of Title III for damages sustained as a consequence of acts described as unlawful which also constitute unfair labor practices under 8 (B) (4) (A).—GERHARD VAN ARKEL, former NLRB counsel.

"Today the conflict between freedom for the individual and rigid authority for the state is in eruption throughout the world. Peoples who had struggled for generations to gain precious liberties are thrust back into the darkness of materialism and oppression. At every hand the way of the democracies is challenged by fresh aggressions upon the human spirit.

"Sometimes these present problems seem beyond the power of any single man to cure. Yet if each follows the simple truths of the prophet, we can all influence the outcome. It is for us, who rejoice in the blessings of freedom, so to live our lives that, as a nation, we are an example to the world. We can then restore peace and dignity to mankind."—J. EDGAR HOOVER.

"It is safer to be a bureaucrat than a maker, and the young men in England know it . . . Socialism is

competition without prizes, boredom without hope, war without victory, and statistics without end. It takes the heart out of young men. . . . It is not only politically false, but morally destructive."—CHAS. MORGAN, the *Sunday Times* (London).

Gag of the Week

Vacationers in a northern Michigan resort lavishly patronized the restaurant which advertised:

"Breakfast all Day."

They'll Do It Every Time

Several weeks ago "Dope" observed that the hoariest of old jokes are resurrected regularly in real life every day—and cited several examples to prove the point. Here's another, right out of our mailbox:

Williams Equipment Co., Ltd.
Honolulu, Hawaii

Dear Mr. Taubeneck:

I've just received the July 25th issue of AIR CONDITIONING & REFRIGERATION NEWS (our shipping strike, you know) and enjoyed your recital of old gags which have actually happened. Deep down in my dark little mind, I'll always cherish the corny situation I once found myself in, and believe you might appreciate it, too.

It happened while I was stationed at the Flexible Gunnery School at Las Vegas, Nevada, after finishing my combat tour in the recent war.

I developed a case of virus pneumonia, and while convalescing in the base hospital, had severe pains in my chest. The doctors didn't know whether it was pleurisy or simply a muscle strained by coughing, but

went along with me to the extent of slipping me something right after supper, which would keep me asleep until shortly after midnight, and repeating it around 1:00 or 2:00 in the morning. They wouldn't give me a pill, but confined it to injections, I suppose to discourage me from asking for it unless I really needed it.

I finally reached the point where I was occasionally passing up the early morning injections, so they changed the instruction on my record card to show that I could have it "if desired."

One night, about 2:00 a.m., I was awakened by the door of my room being thrust back against the wall, and the light being snapped on. There, in the doorway, was a man dressed like a hospital orderly, waving his arms around wildly. He advanced on the bed, still waving his arms, and shouted:

"Your name Williams?"

I said it was, whereupon it turned out that he was the relief orderly, that the waving of his arms was to help dissolve the pellet of morphine in the hypodermic syringe he was carrying, and that he was waking me up to give me the shot so I could sleep!

He's probably in Washington by now.

R. T. WILLIAMS, JR.
Vice President

Tut, Tut, Westinghouse

From A. Pryor's sprightly column in the *Grosse Pointe News*:

"Among the less interesting things we read while vacationing, was an item in a small paper which read: 'Westinghouse Electric Corp. engi-

neers find the air you inhale in your living room on a hot day contains some 1,200 billion dust particles, half a million bacteria, a few hundred million pollen specks, and three pints of water.'

"We wish Westinghouse would mind its own business. You'd think a company that size would have enough to do besides going out of its way to scare the daylighters out of people already tottering on the brink of prostration."

Born Salesmen Are 'Out of This World'

More precious than rubies is the "born salesman." As evidence, we submit this classified advertisement which appeared in the *St. Louis Post-Dispatch*:

"Salesman, expert driver, talker, liar, hunter, fisherman, dancer, traveler, bridge player, poker player, golf player, diplomat, financier, capitalist, philanthropist, authority on palmistry, chemistry, physiology, dogs, cats, horses, blondes, brunettes, and redheads. A man of vision and ambition, after-dinner speaker, night owl—work all day, stay up all night, and appear fresh the next day. Must be a man's man, a ladies' man, a technician, politician, mathematician, and all-around good fellow."

Let's Look at the Record

Advocates of government planning promise security and stability. But in Britain, as elsewhere, they produce endless confusion. The record is plain for all to see.

What does the Planner mean by economic stability? What is it that is to be stabilized: income, prices, profits, money wages, real wages, employment, output, distribution of income, technical methods of production, or all or some combination of these?

When the planner demands a stable economy he doesn't predicate a stationary society. He wants wealth to increase, industries to be progressive, population and the labor force to grow. He wants his bread buttered on both sides. Unfortunately for him, and for the rest of the world, the methods he employs prevent him from having butter even on one side.

Fact is that a centrally directed economy inevitably proves highly unstable. Long-term industrial projects cannot flourish in an environment of political uncertainty. Sudden switches of policy can be expected. When rival political parties all subscribe to the idea of a directed economy, they will compete for votes by offering identical plans with different sets of figures and promises.

A centrally directed economy is subject to the full impact of political instabilities. These are no more dangerous than its inherent tendency to create confusions for itself and to pass from one crisis to another.

In a controlled system there are many thousands of programs. Inevitably, many of these programs will conflict. Since most of these programs are based upon guesses that are as likely to be wrong as right, and since they are infused with a strong element of wishful thinking, only by a miracle could they all come out even. As soon as one program bogs down, all other programs are thrown out of balance, and waste and unemployment result.

There are two possible ways out of this dilemma:

(1) Change the whole deal the moment one program is not achieved. That is never practicable, of course. Preparation of the Master Plan takes so much time and labor in a bureaucracy that such a plan can never be uprooted. The plan itself is the enemy of readjustment.

(2) Keep large inventories on hand so that mistakes can be rectified

before crucial shortages occur. These inventories, however, are self-defeating—since no one can forecast where the planning mistakes will be made. Crucial objection to stockpiling is this: labor cannot be stockpiled.

It is characteristic of all planned economies that policy changes come as bolts from the blue. A production chief who fears he is likely to fall short of the target will tend, for a time, to hope for the best. He will not wish to confess failure, with all its possible penalties. He may hope that a failure of raw material supplies may provide him with a good alibi to cover his own deficiencies. Charges of sabotage may be leveled.

So long as the vast economic blunders of a centrally directed economy are not accepted for what they are—the logical results of the planning process—then the remedies applied are likely to magnify the original errors.

The Great Fuel Crisis

It is to Socialistic Britain's first fuel and power shortage that we must turn for the classic example of a planning crisis. Late on a Friday afternoon, when it was far too late for the news to be spread quickly enough to enable factory managers to inform their workers, the Minister of Fuel and Power announced to a dumfounded House of Commons that electricity supplies to industry were to be cut off. A government pledged to planning and economic stability was compelled to order, at a moment's notice, the closing down of about two thirds of British industry.

No country has ever suffered from a more sudden or catastrophic economic seizure. Unemployment rose to about two and a half million. The crisis probably lost Great Britain 200 million pounds sterling of exports. The over-all loss of production cannot be estimated. In one short day Great Britain had fallen to the ranks of a second-class industrial power.

Undoubtedly the government contributed to its own difficulties by permitting inflation to persist and by using the price system to stimulate instead of restrict the consumption of fuel. The prices of gas and electricity were not increased, although both had been kept at an unduly low level, because they entered into the cost-of-living index number. The proximate cause of the trouble was that ministers gambled in the hope of avoiding measures that were politically unpopular.

Warnings of a probable fuel crisis had flowed in from every quarter. The Minister of Fuel and Power declared: "We must do the best we can, but somebody must go short." Somebody did not go short enough, though, because that would have been unpopular.

The British ship, rudderless because of the absence of the price system, and in charge of a crew so anxious to curry favor that it was not prepared either to get the stoker to raise more steam or to put the passengers to the tedium of taking to the boats, smashed helplessly onto the rocks. The ministers gambled on a mild winter, on an increase in output, on voluntary austerity. (Ministers will always gamble for popularity. Unfortunately, in a planned economy, they have it within their power to gamble not only with their own political future but with the economic fortunes and happiness of their people).

And so the British economy is still struggling with its coal crisis and still caught up in the coils of the fundamental lack of logic in a planned economy.

It is precisely this need of pinning the whole economy to phony statistics that turns Government Planning into vast speculation, in which security and stability disappear.



BAKER AMMONIA COMPRESSORS and CONDENSING UNITS

*Dependable Performance
Proven by 44 Years Experience*

Refrigerating Engineers have learned to depend upon BAKER Ammonia Compressors and Condensing Units for sustained maximum output and long life. The line includes 9 compressor models, 2 to 125 HP; also 4 Ammonia Booster Compressors for two-stage compression on extreme low temperature applications.

Baker's long experience, expert engineering, and enlarged manufacturing facilities insure the finest quality — plus prompt deliveries.

and tie up with the Complete Baker line

which includes Shell and Tube Condensers and Liquid Coolers (1 to 250 tons capacity); Valves and Fittings for Ammonia and Freon; Commercial Ice Making Equipment. A long line of FREON Compressors and Condensing Units, 1/2 to 60 HP capacity; Evaporative Condensers, Heat Transfer Products; Baker "ICE-FLO" Ice Cuber line, and "packaged" Air Conditioners for location and central station installations. Write for literature and information regarding territories now open to Distributors seeking a liberal franchise.

BAKER REFRIGERATION CORPORATION
General Offices: South Windham, Maine
Factories at Omaha, Nebraska and South Windham, Maine

NATIONAL DRY BEVERAGE COOLERS

• Nationally famous NATIONAL CHAMPIONS incorporate all the fine features you look for in a cooler. Be rational . . . buy National!

NATIONAL COOLER CORPORATION • 1600 Woodland Ave. • Cleveland 15, Ohio



4 SIZES
Self Contained or Remote Models

Write for 1949 Catalog

Foreign Affair

Rema Schedules Export Meeting At Atlantic City

WASHINGTON, D. C.—Refrigeration Equipment Manufacturers Association has scheduled two meetings in Atlantic City on Nov. 13, the day before opening of the All-Industry Refrigeration and Air Conditioning Exposition.

A meeting of the board of directors of Rema has been scheduled for the morning of Sunday, Nov. 13, in the Traymore hotel. At 2:30 p.m. on Nov. 13, also in the Traymore, the Export Group will meet.

The several suggestions concerning the future status and operation of the Export Group were given thorough consideration by the Rema board of directors during a meeting this past summer. The board approved in general the five points recommended by the recommendations committee, with the understanding that the details would be worked out at the next meeting of the Export Group. The subject will be given prominence on the agenda of the Nov. 13 session.

Rema is providing a booth during the All-Industry Show to be used as "International Headquarters." The association is arranging for the separate registration of U. S. manufacturers who sell abroad; Canadian visitors; and visitors from other countries who will be present to inspect and purchase equipment. Distinctive ribbons for these visitors will be provided at the time of registration in the booth.

This will make it possible for all interested in export business to meet at a central location, and to arrange for later conferences if desired.

'Wrap-Me-Up'

'End of Season' Service on Cooling Systems Offered at \$5.50 by Dealer

DETROIT—"You wouldn't run your car hard for three months and let it set throughout the winter without taking precautions against deterioration. Have you done as much for your cooling equipment?"

So A. V. Cauhorn Co., local Chrysler Airtemp dealer, asks users of air conditioning equipment in a current letter promoting its "Wrap-Me-Up-for-Winter" service. Stressing that the service will minimize operating failures and service expense next season, the letter states:

"Your air conditioner resembles an automobile engine. It has motors, pistons, bearings, and a circulating system.

"\$5.50 will get you the end-of-season service. If parts are needed, there'll be an extra charge, but we'll tell you and get your approval first.

"Our service department is not a side-line with us—it's Big Business. Therefore, our men have extensive

Westinghouse Has 900 Banking Outlets For Its 'Equity Plan'

PITTSBURGH—Westinghouse Electric Corp. has added seven installment finance representatives to its retail finance division who will have the job of providing on the spot advice and help to dealers and banks participating in the firm's "equity plan," C. F. Gilbert, manager of the division, announced recently.

The equity plan was announced last year and is intended to assist dealers in financing their inventories and their customer's retail purchases through local banks.

According to Gilbert, "acceptance of the program is shown by the fact that almost 900 banking locations in 37 eastern states alone now are available to finance the appliance, radio, and television inventories of Westinghouse dealers and their customers' retail purchases."

About 85% of Westinghouse dealers who finance their inventories are using the manufacturer's plan, Gilbert noted. He pointed out that the plan offers the financing bank a number of protections, including a wholesale repurchase agreement whereby repossessed Westinghouse products from dealer inventories will be repurchased by the company.

Fedders-Quigan Reports 43% Sales Gain In 9 Mos.

BUFFALO—A 43.8% increase in sales for the nine months ended Sept. 30 as compared with the same period last year was reported by the Fedders-Quigan Corp. here.

Fedders sold a \$22,600,000 volume in the first three quarters this year, and \$15,712,000 last year. This represented a gain of \$6,888,000.

N.Y.C. Railroad Installs 'Stand-By' Cooling Units

BUFFALO—The New York Central Railroad is installing at Central Terminal a \$250,000 stand-by system to operate air conditioning equipment of idle passenger cars.

This will make it possible to regulate temperatures in cars when they are disconnected from a locomotive and parked in the sun.

Installation of the system now is about 80% completed and will be in full operation by the end of the year.

It calls for the installation of 84 electrical outlets in the coach yard east of the terminal. Seven similar outlets will be put along tracks 17 and 18 in the terminal. The terminal now has only four such outlets.

The outlets are strategically located. The 84 in the coach yard will be able to service about 40 cars at one time, each car being hooked to the outlets by a line similar to an electric light extension.

The New York Central plans to install 76 more electrical outlets here.

Ft. Lauderdale Has Licensing Ordinance

FORT LAUDERDALE, Fla.—Chief Electrical Inspector Ralph Taylor recently warned all installers of refrigerating or air conditioning equipment in the city that the new licensing ordinance went into effect Oct. 1.

After that date all men working in these fields must have (1) a certificate of competency, (2) bond of \$1,000, and (3) adequate insurance.

R. E. W. A. Sets Program for Annual Meeting During All-Industry Show

CINCINNATI—Refrigeration Equipment Wholesalers Association will hold its annual meeting during the week of the All-Industry Refrigeration & Air Conditioning Exposition.

Outline of the program was released recently by H. S. McCloud, executive secretary of the association. All sessions of the Rewa meetings will be at the Claridge hotel.

The Rewa board of directors will meet on Sunday, Nov. 13. Registration for the annual meeting will be on Monday morning, Nov. 14. Following the annual luncheon Monday noon, the members will meet for their annual business meeting Monday afternoon at 2:35 p.m. The Rewa board will meet again following the general meeting.

On Tuesday night, Nov. 15, an informal dinner dance will be held for Rewa members and their wives at Trimble Hall in the Claridge hotel.

(All sessions at the Claridge hotel.)

SUNDAY, NOV. 13

Meeting of the R.E.W.A. board of directors.

MONDAY, NOV. 14

9 a.m. to 12 noon—Registration, Piccadilly Lounge.

12:30 p.m.—R.E.W.A. luncheon, Ocean Dining Room.

2 p.m.—R.E.W.A. 15th annual meeting, Trimble Hall.

President's report.

Treasurer's report.

Report of finance committee.

Report of manufacturers relations committee.

Report of nominating committee.

Election of directors.

5 p.m.—Meeting of R.E.W.A. board of directors.

TUESDAY, NOV. 15

7:30 p.m.—Informal dinner dance, Trimble Hall.

Jewett Refrigerator Backlog Goes to '50

BUFFALO—The Jewett Refrigerator Co. reported its backlog of new orders has increased to the equivalent of its entire 1949 production. The current backlog, the company added, is sufficient to carry it well through 1950.

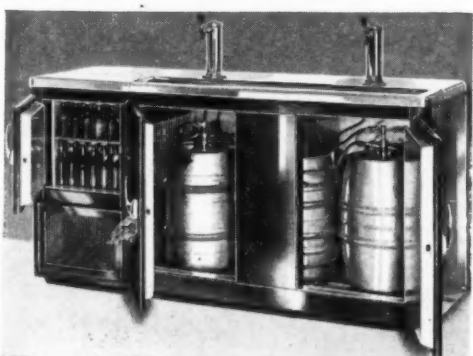
The rise in business has necessitated a 30% increase in employment in the last 90 days.

A. & A. Equipment Takes Frigidaire Commercial

CARLSBAD, N. M.—A. & A. Equipment Co. here, has been appointed an authorized Frigidaire air conditioning and refrigeration dealer, according to Mort B. Aldridge, proprietor.

"We plan to carry a complete line of air conditioning and commercial refrigeration equipment," Aldridge stated.

*You are cordially invited
to attend an exhibit of the new
Detroit 777 Thermostatic Expansion Valves
and the improved Solenoids
at the 6th All-Industry Refrigeration
and Air Conditioning Exposition
at Atlantic City,
November 14th through 18th.
Here for the first time will be presented
what we confidently consider
the most efficiently designed line of valves
ever offered the industry.
We will look forward to welcoming
you at booth Nos. 353-59*



New....

"All-In-One" DISPENSER The PACEMAKER

NEW

First
In The
Field

Space for 2 half-barrels on tap and one in storage—plus 128 bottles. Fits under bar. Includes famous Air Cooled Faucet Standards and built-in hermetically sealed condensing unit!

NEW

Perlick
Leads
Again

IN THE NEW 1949 CATALOG

—this new model, plus our complete dispensing equipment line is illustrated. Write if you have not received your copy!

PERLICK BRASS CO.
IN MILWAUKEE

DETROIT
LUBRICATOR COMPANY

5900 TRUMBULL AVE., DETROIT 8, MICHIGAN
Division of AMERICAN RADIATOR & Standard Sanitary Corporation
Canadian Representatives: RAILWAY & ENGINEERING
SPECIALTIES, LTD.—Montreal, Toronto, Winnipeg



DETROIT HEATING AND REFRIGERATION CONTROLS •
ENGINE SAFETY CONTROLS • FLOAT VALVES AND OIL
BURNER EQUIPMENT • DETROIT EXPANSION VALVES
AND REFRIGERATION ACCESSORIES • STATIONARY
AND LOCOMOTIVE LUBRICATORS

Serving home and industry. AMERICAN STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TONAWANDA IRON

Preview!

Many 'Firsts' Will Mark Exhibits Now Being Prepared for All-Industry Show

Quiet-Heat Will Bow In New Air Conditioners

Center of interest at the Quiet-Heat Mfg. Corp. booth will be the improved 1950 model G-5, ½-hp. Quiet Kool room air conditioner which has a cooling capacity of almost 6,000 B.t.u. per hour. A maximum of efficiency is achieved through the use of a new high capacity compressor, according to the company.

In addition, the firm will bow in its new ¾-hp. model air conditioner, a ¾-hp. dehumidifier, and a 20-in., 3,000 c.f.m. room exhaust fan.

The ¾-hp. air conditioner, called the G-7, has a rating of 8,500 B.t.u. per hour and incorporates an exhaust feature. Thermostatic regulation is optional on both this and the G-5. Both models may be obtained in either brown or ivory finish. On both, the filter may be changed by the user by lifting the cabinet cover.

Day & Night Plans Teaser On 'New Development'

You won't see any products in Day & Night's space but you'll hear plenty of hints about some new ones.

The company is going to use the space to "excite curiosity and speculation" regarding an entirely new line of liquid cooling equipment. This

equipment, on which the company has been doing engineering and laboratory work for the past year, was to have been introduced to the trade at the exposition, but it is not yet quite ready.

To get you started speculating, Day & Night reports that the principles incorporated in the new line "are brand new in the refrigeration art and entirely unlike the conventional methods in use today."

"The objective of this development work was to eliminate the troubles common to liquid cooling equipment and insure a high degree of efficiency in the operation of the units under the most exacting conditions."

If the speculating and/or the show tires you out, you'll find the company's space "a comfortable place to sit down and rest for a spell."

Steinhorst Milk Cooler Has No Hoses, Pipes, or Fittings

The new Steinhorst icy-spray milk cooler will be shown for the first time at the All-Industry Refrigeration and Air Conditioning Exposition.

On this front opening unit, there are no hoses, no pipes, no fittings. The axial flow type of pump is removable as one unit. Spray water cannot enter the can.

Water flows easily under low pressure. The fast melting ice bank is

hollow, thus it provides greater surface area for colder water at all times.

The average milk temperature is reduced from body temperature to less than 55° in ½ hour, and to less than 45° in 1 hour.

This entirely new Steinhorst Milk Cooler will come in all sizes from 4 to 12-can capacities.

Along with this milk cooler, Steinhorst will display its recently introduced "Challenger" line of freezers in both 12 and 20-cu. ft. sizes.

The Challenger freezers boast of Steinhorst "Dutch" freezer plates and "breather wall" method of cabinet construction.

The Challenger models vary from the deluxe Steinhorst freezer line, which will also be shown, in that they have but one top opening counter-balanced lid and they do not have Steinhorst air blast freezing.

Wide Variety of Products To Mark Bush Co. Showing

A wide variety of equipment will be featured at the four booths occupied by the Bush Mfg. Co.

Among those items to be displayed are a complete line of unit coolers together with the DF electric defrost unit, evaporative condensers, comfort coolers, condensers, icemakers, finned evaporator coils, steam coils, water coils, direct expansion coils, and the new Plasti-cooler, which features plastic baffles to prevent sweating.

On hand for the exposition will be J. W. Hatch, president; E. M. Flannery, vice president; F. T. Carney, plant manager; C. A. MacArthur, sales manager; W. C. Schaller, as-

sistant sales manager; as well as the following company officials: C. T. Cavanaugh, W. Hanford, H. R. Prescott, J. Conway, A. Houle, and J. Fazioli.

Lynch Will Undress a Quiet Par Job

"A running display of the quietest operating ¾-hp. belt driven unit, running on a blower coil, that anyone has ever demonstrated in any show" is one of the main ballyhooed attractions at the Lynch Corp. booth.

R. L. Sears, director of sales, added, "Then, in order to give the trade an idea of what makes it tick, we are going to have on display the new pump that is used on this unit, in a partially disassembled state, so that the trade can get inside the pump and take a look at it."

Other running displays will demonstrate the new field serviceable Parmetic line introduced a few months ago. Partially disassembled motor compressors will give the public a look inside.

Exhibited but not running will be a model of the Lynch combination water cooled and air cooled fractional horsepower line and the new 7½-hp. compressor.

The 30-ft. booth will be partially enclosed in glass where the quietness of the motors can be compared, Sears said.

Wagner Will Permit Peek Through a Stroboscope

Ever looked through a stroboscope?

Wagner Electric Corp. is going to have one at booths 342 and 344 at the All-Industry Exposition. It will be attached to a motor and will cause the revolving rotor to appear stationary. This will effectively demonstrate the operation of the quick make-and-break centrifugal switch used on Wagner capacitor-start motors.

One of these switches recently tested made 3,174,800 starts and stops, as many as would be made in approximately 85 years of normal operation, it was said.

Wagner also plans to exhibit a variety of motors, both single-phase and polyphase with several of them cut away to show design and construction details. Handy kits of motor repair parts for refrigeration servicemen will be displayed, too.

Directing traffic to the stroboscope and explaining details about the motor line will be J. H. Devor, vice president in charge of sales; A. H. Hudson, manager of electrical division sales; M. H. Nelson, manager of resale sales department; L. C. Dobrunz, sales promotion manager; L. A. Murphy, manager of the New York branch; J. J. Scheid, St. Louis sales; G. L. Neely, Syracuse sales; R. W. Larson, New York sales; and M. B. Atkinson and A. F. Duernburger, Detroit sales.

Tower for Cooling Will Be Bowed In by Acme

Acme's recently developed cooling tower will get its first public showing at the Acme Industries, Inc. booths (742-744-746) at the All-Industry Exposition.

The tower has a hot-dip galvanized finish and an economical type of filling. It comes equipped with quiet, self-aligning bearings, and the Acme seal plate to prevent grease migration from the shaft bearing.

Another new Acme product which will be presented at this time will be a finned coil for direct expansion, steam, and water.

The parade of Acme products will include various models of ammonia and "Freon" condensers, shell and coil and shell and tube heat exchangers, oil separators for ammonia, and "Freon," and evaporative condensers.

A cutaway model of Acme's Dry-Ex water cooler showing the construction of these units will also be on view.

The exhibit will be supervised by A. B. Newton, Acme sales director, and J. T. Maloney, sales promotion manager. Other officials attending include K. A. Weatherwax, vice president and general manager, and E. B. Dunphy, director of engineering.

15 and 20-ton Packaged Conditioners by Typhoon

New 15 and 20-ton packaged air conditioning units and evaporative condensers will dominate the Typhoon Air Conditioning Co., Inc. booth at the All-Industry Exposition. The new totally enclosed "high side" unit will also rate a top spot in the booth.

For those more interested in smaller size air conditioning units, J. F. Dailey, Typhoon president, will gladly direct attention to his firm's new 1950 models of self-contained 1½, 2, 3, 5, 7½, and 10-ton units with evaporative condenser.

Details on all units will be supplied by E. L. Garfield, treasurer; Don V. Petrone, vice president; M. M. Kabili, chief engineer; A. E. Weber, assistant chief engineer; and Don J. Dailey, John E. York, and P. E. Carter, district managers.

'Sneak Preview' of New Line Promised by Victory

"Nov. 14 is the world premiere and no 'sneak previews' before then!"

That was A. Raymond, president of Victory Metal Mfg. Corp., talking.

"Come to Atlantic City," he said. "You'll see our Sta-Kold baby there. This is our dream—all metal quality and durability, at prices you just won't believe. We've been working on these new refrigerated cases too long to spill the beans prematurely."

So if you like mysteries, the Victory booth is the place to solve one.

Krack To Show Commercial, Comfort Cooling Low Sides

Carrying out the theme of its advertising program for 1949, the Krack display at the 6th All-Industry Refrigeration and Air Conditioning Exposition will feature a parade of all sizes of the Fan-E-Fex general all-purpose unit.

There are nine sizes of this unit ranging from 200 to 1,400 B.t.u. per hour basic ratings. It includes a full size heat exchanger and adjustable directional louvers as part of its original equipment.

Also to be displayed will be the three sizes of Breez-E-Fex, new console comfort cooler which was introduced last spring. This is a remote type unit which entirely eliminates machine noise by providing for remote placement of the machine.

The Krack display will be rounded out with single models of each of the other 15 types of unit coolers and air conditioning equipment made by Refrigeration Appliances, Inc.

WHEN SERVICE INCOME GOES DOWN...

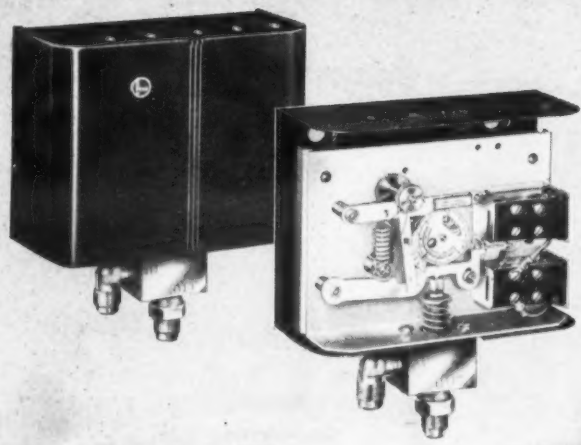
Sell Automatic Defrosting



Every Food Store is a Prospect

On frozen food cabinets, meat cases, blast coil jobs there's a ready market for automatic defrosting.

PENN SERIES 321 HOT GAS DEFROSTER

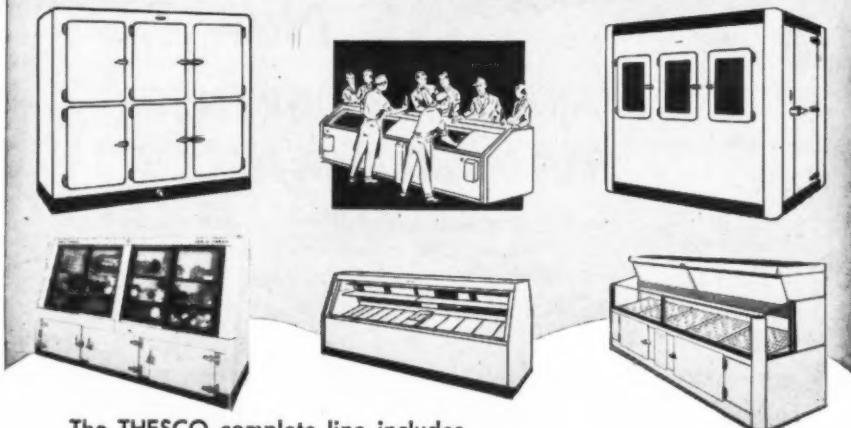


When you show your customers the advantages of fast, positive automatic defrosting they'll want to start enjoying them right now. That's why the Penn Series 321 is a real profit builder—especially in the cooler months when your service load is down. The Series 321 is positive in operation. Heavily spring-loaded valve seats securely, avoids hum or chatter. And this sure operation is not affected by low voltages. It's a single unit control... easy to install. Send for details and diagrams. Penn Electric Switch Co., Goshen, Indiana. Export Division: 13 E. 40th Street, New York 16, N. Y., U. S. A. In Canada: Penn Controls Ltd., Toronto 2, Ont.

PENN
AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

SOME TERRITORY NOW AVAILABLE



The THESCO complete line includes expandit cases and walkins that grow with the merchant's business.

C. SCHMIDT CO.

THESCO

CINCINNATI 14, OHIO

What Some Manufacturers Plan To Show at Atlantic City Next Month

'Demonstration Center' for New Tools Is Planned

A demonstration center in which several "unusual" new tools will be demonstrated is to be one of the high spots of Imperial Brass Mfg. Co.'s exhibit.

New tools to be shown in the space—booths 516, 518, and 520—include a "Rol-Air" flaring tool, which "rolls flares in the air," and new gear-type tube benders.

Other products that will be exhibited are DiaSeal valves, triple-seal flared tube fittings, tube cutters, flaring tools, tube benders, floats, liquid indicators, charging and testing equipment, and soldering and welding equipment.

In the Imperial space will be C. H. Benson, T. A. Byrnes, K. Waugh, R. H. Burk, A. Mitchell, L. Melear, F. Wilson, M. Mitchell, and E. F. Todd.

Cleanable Tube Condensers In Heat-X-Changer Co. Setup

Heat-X-Changer Co. will spotlight two new lines of cleanable tube condensers incorporating the company's new longitudinal internal fin.

Two models of the condensers will be exhibited, one water-cooled and the other combination air and water-cooled.

The condensers will be in operation in an actual refrigeration system. The water-cooled unit will have transparent tubing to show the functioning of the longitudinal fins, which are said to make for high efficiency.

Heat interchangers and water, soda, and beer coolers will also be shown.

'Stage Setting' To House Servel Demonstrator Units

In an atmosphere of colorful pyramids and spotlighted "stage" backgrounds, Servel, Inc. will present its full line of hermetic units, including typical models in all sizes from 1/4 to 5-hp. in a four booth display area.

In order to present a more complete story of the product's features, demonstrator hermetic power units

will be operating at two locations in the booth. Factory engineers will be on hand to provide complete information.

In keeping with design changes, the Supermet is attending the exposition in a brand new "dress." The new coating offers Servel users a particularly desirable feature which the company expects to emphasize in its new sales literature.

The latter will, incidentally, disclose a new simplified numbering system, soon to be announced for the Servel Supermet line.

Highlighting the sales feature of the Servel exhibit will be the recently announced Five-Year Protection Plan, applicable to all fractional horsepower Supermetics shipped from the factory after Oct. 1.

During the show period, Servel representatives will be available for product and merchandising discussions.

Mueller To Show How Accessories Work In System

Where all valves, driers, liquid indicators, and heat exchangers should be installed in a refrigeration system will be demonstrated on an operating refrigeration cycle demonstrator in the Mueller Brass Co. booth.

Why these items should be put where they are and the advantages gained by so doing will be emphasized.

The rest of the exhibit will consist of various valves and coils including the new Mueller globe valves.

Four Mueller men definitely slated to be on hand are Tyler Riggins, jobbing division sales manager; P. O. Domke, refrigeration division sales manager; P. L. Craft, specialty division sales manager; and Robert Gibbs, sales promotion manager.

8 Pieces of Equipment In Tyler Self-Serve Lineup

High level refrigeration and the unusual flexibility of Tyler's new open equipment for the display of fresh, pre-packaged meats and produce will be stressed to all callers at the Tyler Fixture Co.'s 40-ft. display area in booths 533, 535, 537, and 539.

Eight different pieces of equipment will be lined up in two rows for easy inspection. Moving from one to the other, the visitor can look over an 8-ft. low style open self-service frozen foods display case, an 8-ft. continuous double duty open self-service produce display case, a two-door self-contained reach-in refrigerator, an 8-ft. continuous top display self-service meat display case, and a three-shelf open self-service dairy display case.

Coming back along the front row, he can inspect a "Dry-Kold" under-bar beverage cooler, a 10-ft. continuous conventional top display case, and a 12-cu. ft. Harderfree chest type of home freezer.

In between, he can stop and chat with R. L. Tyler, president; J. W. Krall, executive vice president; Paul Jackel, general sales manager; J. B. Hennion, sales promotion manager; R. E. Campbell, eastern division manager; Richard Schaffer, Atlantic division manager; or Rex Holmes, New England division manager.

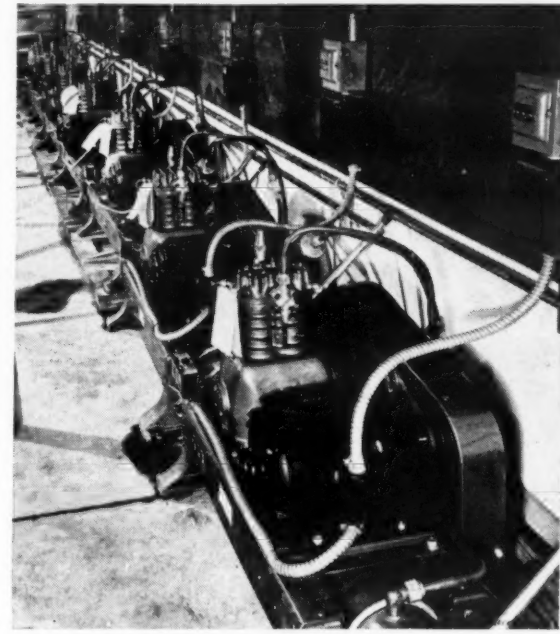
Coldin Says It Will Show 'What Couldn't Be Done'

Coldin Cabinet Co.'s announcement regarding its plans for the exposition was short but provocative.

Reporting that the company's exhibit will feature new ideas in commercial refrigeration, in addition to its regular line, the firm said:

"There will be in operation, for the first time, a display case about which all other manufacturers have said, 'It couldn't be done.' Coldin did it!" No other details were given.

Kind of 'Lineup' That Makes This Industry a Winner



The continuing boom in supermarkets continues to provide opportunities for multiple installations of commercial refrigeration units. In this picture a battery of seven Mills condensing units is shown installed to handle 128 ft. of open self-serve refrigerated display cases in the Serv-All supermarket in Lincoln, claimed to be Nebraska's newest and largest. Two other Mills units serve two walk-in coolers.

Solarometer, Model Stores In Libbey-Owens Setup

A revised version of the famous Solarometer—used in demonstrating the solar heating principle—will highlight the Libbey-Owens-Ford exhibit in booths 825 and 827. The Solarometer shows the position of the sun with respect to a model house for any latitude at any hour of any day of the year. These factors are of interest to air conditioning engineers when considering instantaneous heat gain.

Another booth feature will be a projection device that shows typical

installations of Thermopane insulating glass.

Four miniature scale models of food stores will be set up to show the use of Thermopane insulating glass and heat absorbing glass in store fronts.

Planning to be present at the booth are J. M. Johns, general manager of industrial sales; H. L. Monteith, eastern regional sales promotion manager; C. F. Shima, district industrial manager; R. W. Troup, industrial representative; Floyd Petee, Philadelphia district industrial manager; and Gordon Orbesen, who is Thermopane technical consultant.

Go after sales with a BTC PORTABLE DISPLAY CASE

and 3-DIMENSIONAL PICTURES

Here's the new way to step up your frozen food sales — go after them with a BTC Portable Display Case. BTC's revolutionary display case enables you to place frozen foods where store traffic is heaviest... and to cash in on the tie-in with related food items.

The BTC Portable Display Case is small enough to fit almost anywhere in the store, yet has ample room for 190 average frozen food packages. Its low-level superstructure is fluorescent lighted with 3-dimensional, full-color pictures that attract attention and win more sales. Other features include two price panels, stainless steel top trim, plug-in operation, smooth rolling casters and a 5-year warranty against food spoilage and mechanical defects in hermetically sealed compressor unit.

PORTABLE DISPLAY CASE Model DC6-2

Has same features as above model with 3-dimensional pictures replaced by mirror for effective display of contents.



PORTABLE ICE CREAM CABINET Model DC6-ICD

Has 5½ cubic foot capacity. Available in two models — with two or three lateral plates.

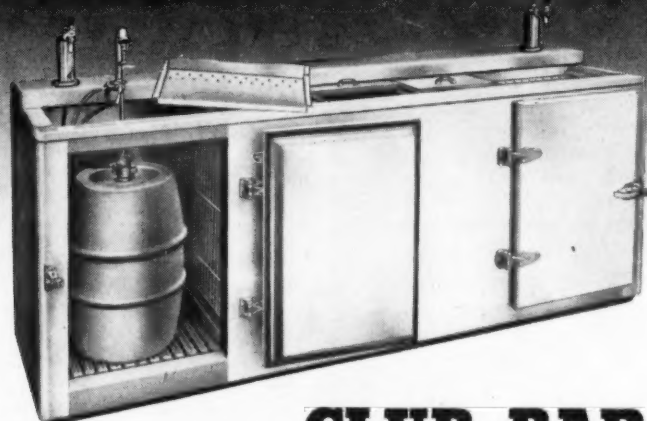


Model DC6-2D

Write today for full details on BTC Model DC 6-2D, or on any of the other two models shown.

Beverage-Air

Convenience and Compactness
Creates CUSTOMER INTEREST...



CLUB BAR

MODEL E94-7

BEVERAGE-AIR ENJOYS COMPLETE CONSUMER ACCEPTANCE FOR HIGH-QUALITY PERFORMANCE, CONVENIENCE AND COMPACTNESS... THIS RESULTS IN MORE SALES.

CHECK THESE CLUB BAR FEATURES...

LESS STEPS—Draw stations are located at each end for better accessibility.

LESS WASTE—Specially-treated, short, rod-to-faucet-connectors provide palatable beer always at the right serving temperature... NEVER FLAT, SOUR, OR STALE BEER... or more important, NEVER WILD BEER.

NO KEG-TILTING—NO SQUATTING—Removable drain pans facilitate keg handling and tapping. EVERYTHING IS IN EASY REACH!

APPEARANCE—Gleaming stainless steel and aluminum heavily-insulated cabinet.

MORE SPACE—Exclusive interchangeable compartment arrangements permit bottle or draft capacities as needed.

Write for more information on BEVERAGE-AIR Club Bars and Bottle Coolers.



MANUFACTURERS OF BEVERAGE-AIR BOTTLE COOLERS and CLUB BARS

THE PUNXSUTAWNEY COMPANY
DEPT. A PUNXSUTAWNEY, PENNSYLVANIA

THE BREWER-TITCHENER CORPORATION
Binghamton, New York

SOMETHING NEW
has been added to the
NOW
well known and accepted
CUNNINGHAM
line of Cabinets



This six foot long dairy products display cabinet has a capacity of 20 or more cases of milk. It is finished in gleaming white Dupont's Dulux and popularly priced as are its companion dairy products and frozen food open type display cabinets.

CUNNINGHAM PRODUCTS COMPANY
8790 GRINNELL AVENUE, DETROIT 13, MICHIGAN

R.S.E.S. Program at Atlantic City Convention To Feature Demonstrations of 'New Ways'

CHICAGO—The Refrigeration Service Engineers Society has completed its plans for its 12th annual convention at Atlantic City starting Nov. 13, at the Ambassador hotel.

Both the Ambassador and Ritz Carlton hotels are being used to house members and guests attending the educational meetings of the association.

Members and guests will register on Sunday morning and the convention will formally open at 1 p.m. on Sunday. Business of the association will occupy most of the afternoon, concluding with an educational feature.

The educational program will be held on the following Monday, Tuesday, and Wednesday mornings, so that ample opportunity is allowed for complete inspection of exhibits during the open afternoon hours.

International Educational Director Paul Reed is arranging a program of subjects of vital interest to all service engineers and contractors. The program is being built around actual demonstrations, rather than mere presentations of papers.

Included among the subjects that will be discussed and demonstrated by prominent industry authorities are the following subjects:

"Soft Soldering"—demonstration of soldering pipe and fittings. "Ultra-Violet Light"—demonstration of lights to preserve food and finding refrigerant leaks as well as other uses. "The Underwriters' Label and

the Service Engineer"—what the UL label means to the service engineer and how both can help each other.

"Testing and Repairing Hermetic Units"—how to test hermetic units and what repairs can effectively be made in the field. "Field Motor Service"—symposium of motor troubles. Demonstration and motor problems answered by an expert. "The Money End of the Service Business"—sound advice of a financier on how to organize and manage a sales and service business to make money. "Safety Pays All Ways"—Discussion of safety work and illustrated safety slides.

The RSES annual banquet is scheduled for Tuesday at 7 p.m. at the Ambassador hotel. The entertainment committee is promising an evening "that will long be remembered."

Committees have been busily engaged in completing arrangements for the various activities of the convention. Chairmen heading the committees are:

General conference chairman, W. I. Freeman, Newark, N. J. Co-chairmen, Fred Asselmeyer, New York City, and Morris Silver, Philadelphia. Entertainment, James McCue, Boston. Program, M. C. Robinson, New York City. Publicity, James H. White, New York City.

Housing, Carl Steinmetz, Trenton, N. J. RSES exhibit, Bert Miller, Medina, N. Y. Ladies auxiliary coordinator, John Mendell, Rochester, N. Y. Reception, Robert Keil, Philadelphia. Educational, Harry J. Dunbar, Philadelphia. Sergeant-at-arms, Koss O. Fogg, Schenectady, N. Y. Registration, George Gardner, Schenectady, N. Y.

All ladies attending the convention are invited to participate in the entertainment activities arranged by the RSES Auxiliary.

Wives of RSES members as well as Auxiliary members are invited to register at the same time their husbands do, and to join in the Auxiliary activities. A lounge is being set aside for the Auxiliary's use. It is called the "House of Friendship" and is an elevation of the lounge where the registrations take place. All the ladies are invited to use this lounge to get acquainted, write letters, play cards, or anything they care to do.

(All educational and business sessions will be held in the Hotel Ambassador "22" club.)

Symbols Chart Available On Air Conditioning

CHICAGO—Architects, engineers, designers, and builders are being offered standard architectural and engineering symbols for air conditioning and heating components in wall chart form on slick enamel stock, tinted at both top and bottom with loop for hanging, size 17 by 22 in.

The publication of this chart in its present form is said to fill the need to help engineers, architects, and technical men to help to promote its common language and avoid errors and misunderstandings in specifications and drawings.

The reverse side of this chart covers Decimal Equivalents.

The charts are available in bulk quantities with imprint or in single copies at \$1 from the Wall Catalog Co., 59 E. Madison St. Chicago.

Florida Shoe Store Is Proud of Air Cooling

ST. PETERSBURG—Carson's Fine Shoes for Women and Children opened its new store at 360 Central Ave. recently. For weeks previous to the opening, newspaper advertisements highlighted the fact that the new store would be completely air conditioned.

Program Outline

SUNDAY, NOV. 13

9 a.m.—Registration
1 p.m.—Business meeting.
Introduction of international officers.

Introduction of convention committee chairmen.

Greetings from the Refrigeration Equipment Manufacturers Association—K. B. Thorndike, president.

Greetings from the Refrigeration Equipment Wholesalers Association—H. W. Holt, president.

Greetings from the Refrigeration and Air Conditioning Contractors Association—H. E. Wheeler, president.

President's address—Charles C. E. Harris, Boston.

Report of secretary—H. T. McDermott, Chicago.

Report of treasurer—M. R. Hanks, San Diego, Calif.

Report of international committees.

4 p.m.—"The Money End of the Service Business." Advice from a financier on how to organize and manage a sales and service business to make money. Edward Fogel, financial consultant and certified public accountant, Philadelphia.

MONDAY, NOV. 14

9 a.m.—Questions and answers.

10 a.m.—"Safety Pays All Ways." Discussion of safety work and illustrated safety slides. George J. Schuld, Sr., international RSES safety committee chairman, Cleveland.

11 a.m.—"The Underwriters' Label and the Service Engineer." What the UL label means to the service engineer and how both can help each other. Demonstration. E. F. Tabicz, engineer, Underwriters' Laboratories, Chicago.

Noon—"Testing and Repairing Hermetic Units." How to test hermetic units and what repairs can effectively be made in the field. Demonstration. Emmett Williams, president, Airserco Mfg. Co.

TUESDAY, NOV. 15

9 a.m.—Questions and answers.

10 a.m.—"Soft Soldering"—demonstration of soldering pipe and fittings. Paul Domke, sales engineer, Mueller Brass Co.

11 a.m.—"Ultra-Violet Light"—demonstration of lights to preserve food and finding refrigerant leaks as well as their uses. L. Goodson, Ultra-Violet Ray Products Co., Los Angeles.

12 noon—"Field Motor Service"—symposium of motor troubles. Demonstration and motor problems answered by an expert. B. L. Britt, service manager, Wagner Electric Corp.

7 p.m.—RSES annual banquet and entertainment. Main dining room, Ambassador hotel. Secure tickets in advance at registration desk.

WEDNESDAY, NOV. 16

10 a.m.—Questions and answers.
11 a.m.—Concluding business session: Unfinished business; committee reports; election of officers; new business.

Black, Sivalls, Bryson Report Wins Award

KANSAS CITY, Mo.—For the third consecutive year, Black, Sivalls and Bryson, Inc. has won the bronze "Oscar of Industry" presented by *Financial World* for the best annual report of the materials handling equipment industry.

By winning the bronze "Oscar," the company's annual report is placed in the running for the silver and gold trophies.

More than 4,500 corporation annual reports were reviewed in this national survey, the ninth in the series, and these were judged in one hundred industrial classifications for "Best of Industry" awards.

See Your **KEROTEST** *Wholesaler*

**PROMPT, MONEY-SAVING SERVICE
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Always First with the Latest!

SWIFT PULLEYS AND FAN BLADES
INDUSTRIAL & VARIABLE SPEED PULLEYS
Standard equipment with most refrigeration unit manufacturers.

See us at Booth 755 All-Industry Exposition
SWIFT MANUFACTURING CO., INC.
1455 E. NINE MILE ROAD HAZEL PARK, MICH.

Preview

Many New Models Will Make Debut During Week of All-Industry Show

First Public Showing of Carrier Ice Cube Maker

Seven products—including a new ice cube maker—will be displayed by Carrier Corp., at the All-Industry Exposition.

Visitors will see the ice cube maker in full operation. It will be the first public showing of this new product.

Interest is also expected to center on a deluxe room air conditioner, a 1-ton model, largest in the Carrier line for individual room conditioning for offices and homes.

The unit will have transparent plastic panels so that visitors can see the inner mechanism as the finger-tip control dials change the cycle through the stages of ventilation, cooling, and dehumidification, and the reverse feature for the rapid exhaust of room odors.

Carrier will also display a 5-ton Weathermaker, a self-contained unit for store or large office application within the conditioned area; a system Weathermaker, used for air distribution from central systems; a conduit Weathermaker, the type of unit now being installed in four new New York skyscrapers; a Model 5F60 compressor of the reciprocating type, shown in cutaway for manual operation to see how it operates; and a large-size gas fired unit heater, for space heating and ventilation.

Century Electric Features 'Latest Designs' In Motors

Century Electric Co. reports that its exhibit will include "the latest designs in refrigeration motors."

The company said particular emphasis will be placed on hermetic motors, polyphase squirrel cage motors, and "the engineering information needed for the proper application of electric motors in the refrigeration industry."

Frigidaire Exhibit To Tell Story of 400 Items

The graphic story of more than 400 commercial refrigeration and air conditioning products and the extent of their advanced development will be unfolded by Frigidaire Div. of General Motors Corp. for visitors attending the Show.

The Frigidaire exhibit will occupy five complete spaces including numbers 405, 407, 409, 411, and 413.

Many of the products will be in actual operation. Others will be special operating cutaway models. Motionized displays will tell the Frigidaire story of engineering know-how and production advancement.

Frigidaire's modern new commercial "reach-in" refrigerators, display cases, ice cream cabinets, frozen food cabinets, and water coolers will be shown.

In addition, representative models of the company's commercial "Meter-Miser" compressor, a sealed, rotary-type unit, will be displayed together with air, water, and combination air-water cooled reciprocating compressors.

There will be typical examples of Frigidaire air conditioners, including both new self-contained packaged and remote models. Other products will include farm milk coolers, beverage coolers, forced air cooling units of various capacities, gravity-type cooling coils, and ice-making coils.

Another highlight which is sure to attract the attention of visitors at the Frigidaire exhibit will be a cutaway model of the electric dehumidifier in operation. Spectators will have the opportunity to see the product actually removing water from the air of the Auditorium.

A special display of Frigidaire service parts will also be incorporated into the exhibit pattern.

A large delegation of key factory and district personnel is planning to attend. The special factory group is headed by W. F. Switzer, commercial sales manager; Fred E. Lehman, assistant commercial sales manager; and B. C. Wagner, commercial product sales manager.

Others are C. F. Wood, assistant manager in charge of air conditioning retail sales; J. A. Smith, commercial

product application manager; E. J. Boyer, of air conditioning retail sales; R. Woodward, of commercial product application; and William Winn, of commercial product sales.

Kold-Hold Hints at A 'Mystery' Product

Featuring the theme "Dependable refrigeration—in the plant and on the road," the display of Kold-Hold Mfg. Co. in booths 322 to 326 will show the use of "Serpentine" prime surface low-sides as stands, banks, liners, and conversion units.

"Hold-Over" truck refrigeration and the new "Package" truck unit will also be displayed.

"It is hoped," the company said, "that a new product, now being per-

fectured, will be ready so it may be introduced to the trade at the show."

J. R. Tranter, president; Mrs. L. Worthington, assistant secretary; E. Thiele, sales manager; and representatives from various territories will be in the space.

'4-Season' Room Unit In Remington Lineup

Heading the list of new offerings to be displayed by Remington Air Conditioning Div. of Remington Corp. will be its "4-Season" room air conditioner, a 1½-hp. console unit featuring heating as well as cooling, with a "unique" single control.

"The user sets a thermostat at the temperature setting desired and the Remington unit automatically heats or cools as necessary to maintain that temperature without further attention," the company explained.

Herbert Livingston Laube, Remington president, described the unit as "a big and entirely logical step ahead in room air conditioner merchandising."

Also to be shown are Remington's

previously-announced marine-type room units.

An added feature in the company's 1950 line of consoles for 60-cycle current is a newly-developed, hermetically-sealed compressor "requiring substantially less watts per 1,000 B.t.u." It is said to cut operating costs of Remington room air conditioners "by 15% or more."

New console cabinets in Honduras mahogany or blonde African avodire will be exhibited for the first time.

The Remington line now includes 12 models, both air and water-cooled, ranging from ½-hp. window sill units to 1½-hp. consoles.

Representing the company in booth 531 will be Laube; M. Mark Watkins, vice president; William H. Peters, assistant sales manager; and E. M. Johnson, southeastern district mgr.

Interest at Dole Booth To Focus on 'Quick Coupler'

A brand new Quick Coupler will be the center of interest at the Dole Refrigerating Co. booth. It will share the spotlight with a latent heat storage unit and a hot gas defrost bank.

Universal Cooler Has New 1-Hp. Sealed Unit

In a "striking" booth arrangement topped by two gigantic signs of its trade mark, Universal Cooler will introduce a new ¾ and a new 1-hp. hermetically-sealed condensing unit.

These models are not adaptations of open-type equipment but completely new "big brothers" to the Universal ¼ through ½-hp. hermetics, the company pointed out. The new models are of Universal's inverted "W", three-cylinder design and will be available in both high and low-temperature models.

Also to be announced is the supplanting of the present ½-hp. model with two new models designed for more critical application in the high and low-temperature field.

Altogether, Universal will display "a complete range of hermetically-sealed as well as open-type equipment."

All key personnel from the sales, service, and engineering departments of both the Marion, Ohio, and Canadian plants will be on hand at the booth.

They're new

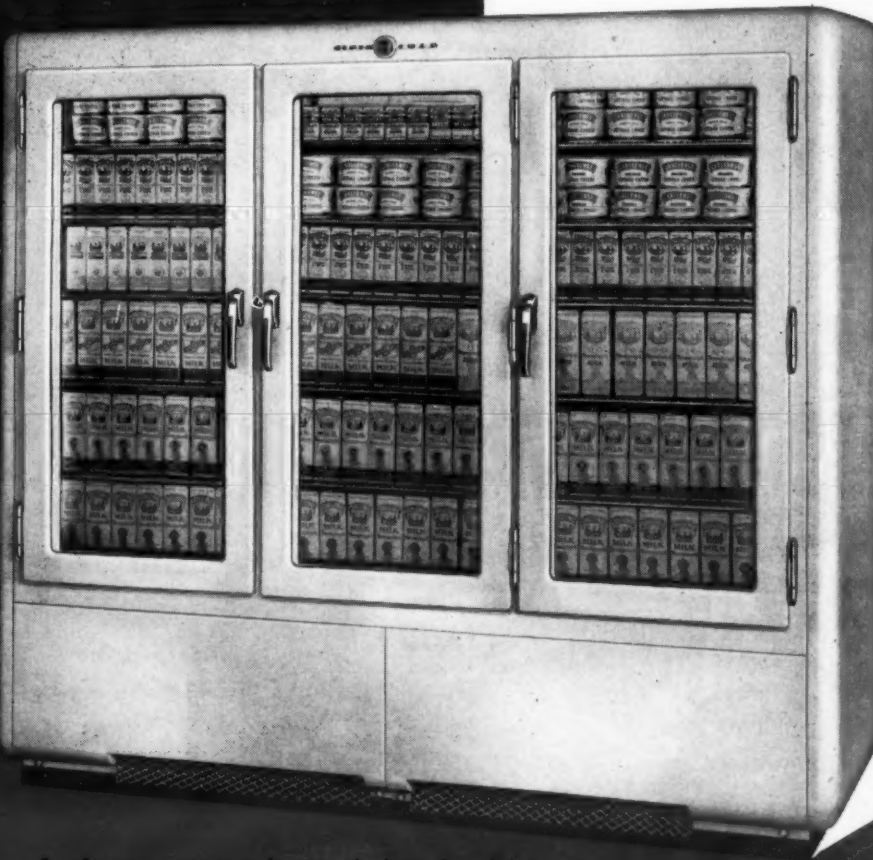
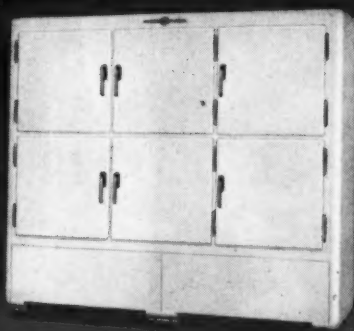
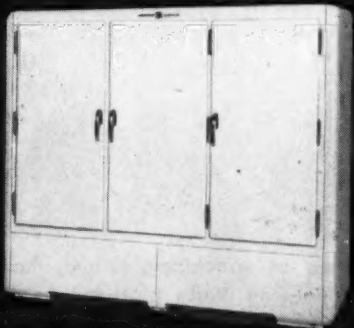
BETTER... IN ENGINEERING!

BETTER... IN MODERN DISPLAY!

BETTER... IN DESIGN!

Here's the know-how, the research, the experience—the culmination of imagination and skill of more than a quarter-century in making practical, top-quality refrigerated display cases. It's the new 'way ahead One-Sixty wall display case by Super-Cold. No "space—robber" coils. All coils,

condensing unit and mechanical controls completely built into bottom of case. More display area, more beautiful lighting, technically finer with Super-Cold's modern refrigeration for economy and long service. The new 'way ahead One-Sixty wall display cases feature: Sealed unit, extra-large display area, easy-to-clean arrangement, tension-tough, adjustable shelves; display area beautifully lighted like a stage with hidden full length vertical fluorescents. Plug-in installation.



Above: Model 160-2, 4 Door Solid Panel

Simply your customers deserve the best. Certainly they deserve nothing less than these new Super-Cold!



Sell the line that offers complete merchandising, from a firm that can give sales training and merchandising techniques gained in 25 years of successful retailing as well as manufacturing and distributing experience. Super-Cold allows you high profit, with advertising sales material support and cooperative assistance to make your job easier on one of the most liberal franchises available. You'll be 'way ahead with 'way ahead Super-Cold. Get the facts now!

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GUARDIAN OF
Flavor
Appearance
Purity

COMPLETE FOOD STORE REFRIGERATION UNDER ONE GREAT NAME

Refrigerated Corn

Husked and Packaged Where Grown, Corn Retains High Sugar Content If Kept at Low Temperature

WASHINGTON, D. C. — Sweet corn, husked and packaged where it is grown, will arrive at distant markets in prime condition if adequate refrigeration is provided all along the line.

That is the conclusion reached by plant scientists of the U. S. Department of Agriculture and the Florida Agricultural Experiment Station in a study made with the cooperation of a Florida grower this past year. The work was done under the Research and Marketing Act of 1946.

Pre-packaging sweet corn in the production area has several advantages. It offers:

(1) an opportunity for quick and efficient cooling, which is of major importance. The high sugar content of freshly harvested corn thus turns to starch unless the corn is quickly cooled—ideally just above freezing—and held at low temperatures.

(2) it permits waste husks and cobs to be used as stock feed and fertilizer on the farm. And

(3) it results in big savings in transportation costs. One truck of pre-packaged corn equals about three truck loads of crated bulk corn.

The investigators found that pre-cooling the corn to the desired low temperature required a minimum of 20 minutes in the hydro cooler when the water temperature was from 36 to 38° F.

Even though the packaging operations were carried on with speed—

from field to cold storage in 45 minutes—the pre-cooled corn warmed up several degrees during packaging.

On the basis of this, the specialists say further cooling in storage after hydrocooling is needed before the corn is packaged.

Shipment of pre-packaged corn by truck will require improvements in refrigeration, particularly in air circulation in the trucks, the study shows. In test loads, substantial cooling occurred in 3 of 4 mechanically refrigerated trucks but in only 1 of 6 iced trucks.

Average arrival temperatures were 43.7° F. for the mechanically cooled and 50.4° F. for the iced trucks. Rapid pre-cooling to 32–35° F. and maintenance of these temperatures would result in corn of far superior quality.

A. L. Golay Represents National Refrigerators in Kansas City

KANSAS CITY, Mo.—A. L. (Al) Golay now represents the National Refrigerators Co. of St. Louis in its Kansas City territory, Golay announced recently.

Golay will retain the Kold-Trux line which he will take with him from the Indiana, Ohio, Michigan territory which he had been covering from Indianapolis. He formerly covered the Missouri and Kansas sectors for Kold-Hold Mfg. Co.

New Toledo Supermarket Uses Special 'Caps' On Frozen Food Cases To Aid Defrosting

TOLEDO — Toledo's newest independent supermarket, a 100% self-service, air conditioned store at Cherry and Delaware Sts., was opened here recently with customers selecting foods from 20 refrigerated cases lining three walls.

Not a penny was spared by Oscar Joseph and his four sons to make their second Food Town market "one of Toledo's finest food retail outlets."

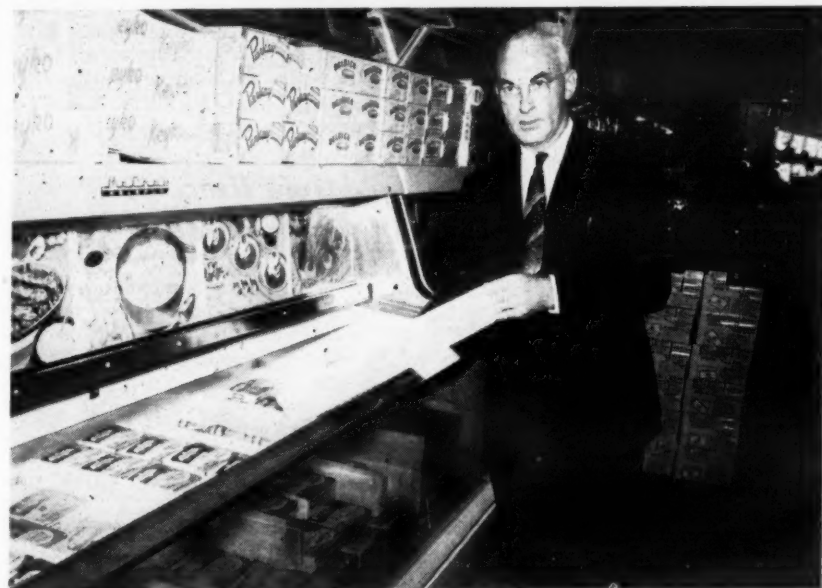
Here are some of the features of this 70 by 100-ft. mart:

Adjacent to it is a black top parking lot accommodating more than 200 cars. Electric eyes open the doors, both for those going in and those coming out. Side walls are tiled with large glass block windows to provide light. The upper half of the rear wall bears a wallpaper mural depicting a hunting scene.

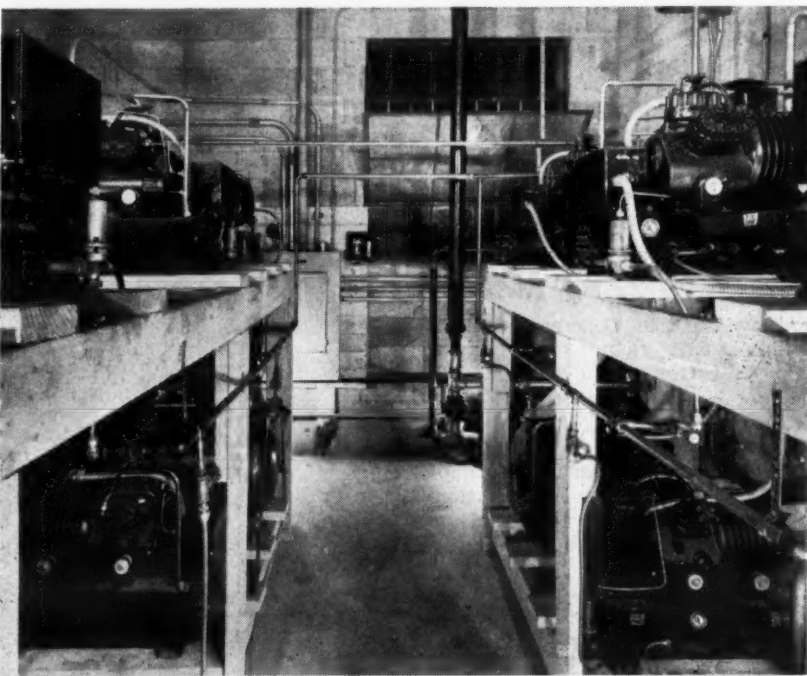
Fluorescent lighting is provided from long strip tubes running the length of the acoustical ceiling. Five checkout stands speed customers on their way. A 25-ton Carrier air conditioning system, coupled with a U. S. Radiator Co. automatic gas boiler, provides year-round air conditioning.

The entire store was completely planned and designed, and the equipment installed by Davison Associates, Inc., local McCray distributor, excepting the air conditioning equipment which was installed by Hausman Steel Co., local Carrier dealer, and the scales and cash registers.

Seventeen of the self-serve refrigerated cases were made by McCray Refrigerator Co. These include seven 11-ft. meat cases, four 6-ft. dairy cases, three 8-ft. frozen food cases, and three 10-ft. produce cases.



Derwood Beach, installation manager for Davison Associates, Inc., McCray distributor in Toledo, holds the aluminum freezer plate defrost cap devised by McCray and Davison. This cap fits over the freezer plate and catches most of the frost that accumulates. The store owner merely removes the cap, rinses it off, and puts it back, and the unit is defrosted.



View of machinery room located behind cutting room. The Servel condensing units pictured here provide 21¼ hp. Each unit is plainly marked to show what equipment it serves.

The other units were two specially-built La Crosse beverage coolers for beer and soft drinks and a self-contained Kelvinator ice cream cabinet.

The refrigeration condensing units for all these cases, except the ice cream cabinet, are concentrated in a machinery room behind the meat cutting room. The air conditioning and heating equipment is also located here.

(Concluded on next page)

Nothing like Teamwork!

says the **LEHIGH TEAM**

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COMMERCIAL REFRIGERATION

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The men you know . . .
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MANAGEMENT
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Auto-Lite Thermometers are designed to give you the broadest selection for your needs: Priced low and precision-made for accuracy, these instruments point the way to temperature savings and help to prevent spoilage. Write for catalog showing the many styles and types of Auto-Lite Thermometers that are available.

TYPICAL APPLICATIONS: STORAGE TANKS & ROOMS, COOLERS, DRYERS, AIR CONDITIONING

Illustrated, at top: Model G Indicating Thermometer, flush mounting type with capillary tubing for remote reading. Priced from \$18. At bottom: Model V Thermometer (vapor pressure type). Rigid stem for direct mounting. Priced from \$10.25.

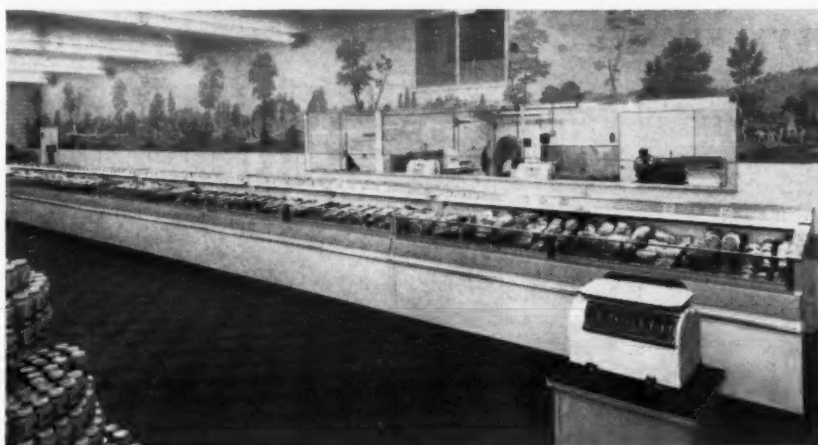
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INDICATING & RECORDING THERMOMETERS

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View of one side wall in the modern Joseph's Food Town supermarket in Toledo. In the picture are three self-serve dairy cases, three frozen food cases, and two meat cases.



View of rear wall of Joseph's Food Town. Five self-service meat cases extend along the foreground. Wallpaper mural depicts a hunting scene. Cutting and wrapping room, offers easy access to self-service cases.

Market Installs 20 Refrigerated Cases

(Concluded from preceding page)

The refrigeration job is divided between 10 Servel condensing units, having 20 1/4 hp. in all. They are set up on two 2-deck wooden racks, five units to a rack.

On one are a 3/4-hp. unit to serve the beverage coolers, a 3-hp. unit for the frozen food cases, a 2-hp. unit for the dairy display cases, a 2-hp. unit to serve three of the meat cases, and a 3-hp. unit for the other four.

A 1 1/2-hp. unit on the other rack serves the produce cases. The remaining units on this rack cool the market's three walk-in refrigerators and cutting room.

HOW COLD FOR CUTTING ROOM?

A 2-hp. unit, working with a No. 6 combination Kramer Trenton Thermobank defrosting unit, holds the meat cooler to 29° F., while a unit of the same size combined with a No. 210 Thermobank maintains 0° F. in the freezer room.

A 1-hp. unit with a 867HC Betz cooler keeps the produce room at 35° F. The remaining 3-hp. unit operates in conjunction with three 867HR Betz coolers to cool the meat cutting room to temperatures between 50° and 60° F.

The temperature at which the cutting room will be held is still a matter of experimentation, Derwood Beach, installation manager and refrigeration engineer for Davison, pointed out. At 50° F., the butchers complained that it was too cold and at 60° F. it was too warm.

FAST SERVICE FOR MEAT CASES

Three butchers and four packaging girls work in the cutting room. The butchers cut the meat and the girls weigh, package, and label it. All of these operations are visible to the public through a glass front extending the width of the room.

A full-width opening in the glass permits the packaging girls to pass special orders or replacement trays directly to a hostess who services the five cases from an elevated platform between the cases and the rear wall.

An unusual feature of the frozen food cases is the use of aluminum defrosting caps that fit over the refrigerated dividers. These are an innovation being tried for the first time here by McCray, Beach said.

They are intended to make it unnecessary for the store operator to turn off the unit for defrosting. With

the caps, he need only remove them—they slip right off the divider—rinse the frost off in a few seconds, and replace them.

Another unusual feature is a specially-designed bakery island display rack made by Davison Associates. The rack stands about 6 ft. tall and has three sloping shelves in the upper

half and a single large storage bin for bread at the bottom.

The baked goods will soon come from Joseph's own bakery which is being constructed right behind the store. Already installed in the bakery is a large dough retarder, powered by a 3/4-hp. Servel unit, also installed by Davison.

Young Heads Kelvinator Major Markets Div.

DETROIT—Appointment of John L. Young as manager of Kelvinator's major markets division has been announced by C. T. Lawson, vice president of Nash-Kelvinator Corp. in charge of Kelvinator sales.

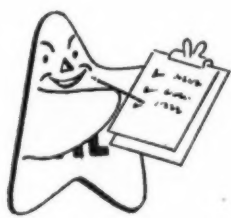
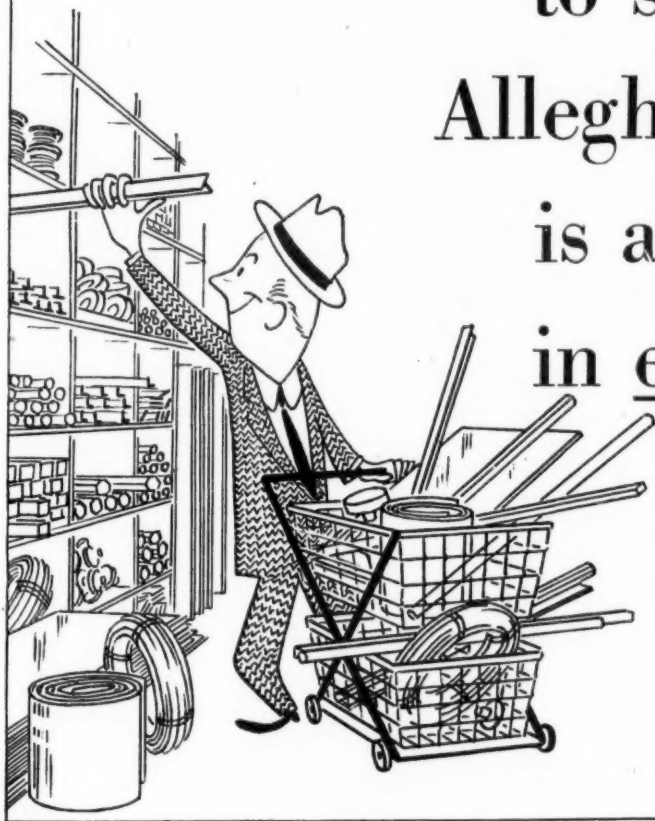


John L. Young at Detroit.

Young, who has been sales manager of the Chicago zone, was formerly major markets representative of Kelvinator with headquarters

He entered the appliance business in 1928 as a salesman in Memphis. In 1932 he became appliance buyer for Joske Brothers, Inc., at San Antonio, a unit of Allied Stores, Inc., and later managed the appliance department at Herpolsheimer's in Grand Rapids.

You don't have
to shop around...
Allegheny Stainless
is available
in every form
you may need



WHATEVER you want, it's available in Allegheny Metal—from the finest of wire to heavy plates, castings and forgings, including sheets, strip, bars, shapes, tubes—everything!

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Complete technical and fabricating data—engineering help, too—yours for the asking.

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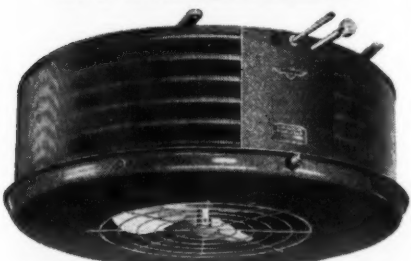
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The acid test of any product is performance. That's why you will find Larkin products used so widely for so many different refrigeration and air-conditioning applications. Users know from past experience that they can count on Larkin for top performance—day in, day out—year in, year out.

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—and a complete new
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6th All-Industry
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Exposition



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1909 — 40th Anniversary — 1949



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• COMPRESSORS
• HIGH SIDE UNITS
• AIR CONDITIONERS



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F. M. COCKRELL, Founder

Published Every Monday by BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0924.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: \$5.00 per year; 2 years \$8.00. All other foreign countries: \$7.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Please send remittance with order.

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VOLUME 58, No. 7, SERIAL NO. 1,074, OCTOBER 17, 1949

The Home Freezer Is More
Than a 'Crisis Product'

BACK during World War II when the home freezer was first introduced to the public on a large scale, it quickly earned a reputation as a problem-solver.

For in those days the stay-at-home consumer found it difficult to obtain sufficient fresh fruits and vegetables on the summer market. Reason: the Armed Forces were siphoning off most of the farmer's output for use on far-flung fronts. Hence, the small lots of fresh produce for the domestic market were avidly bid for. Prices went up and up—soon attaining a level out of the reach of many families. Yet these people still had to eat. So what did they do? Why they simply took Uncle Sam's advice and started a Victory Garden. That way there were plenty of vegetables and fruits for their own tables, and in many cases, a surplus for the general market.

At first the Victory Garden technique seemed like the final solution to a pressing supply problem. But it wasn't.

Consumers were finding that while they enjoyed a glut of produce from their own gardens during the summer, the continuing scarcity made it impossible to procure fresh-tasting out-of-season fruits and vegetables when the mercury crowded zero. Home canning provided only a second-rate method of beating this problem. Some means was needed for laying away that summer surplus so that it would still retain its original freshness at Christmas time.

Then along came the home freezer with the right answer.

Smart specialty salesmen made the most of the freezer's prize attribute. They pushed the low-temperature storage technique of dodging food scarcity for all it was worth. And as a result, they sold plenty of freezers.

But in accomplishing this feat, they committed a sin of omission.

Appliance salesmen who sold the "food scarcity" angle during those first early days, focused public attention on the freezer as a "crisis product"—and little else. They neglected to tell enough people that the freezer wasn't simply a device to aid the war effort, but an entirely new way of life!

To be sure, the "food scarcity" approach made lots of immediate sales, but for every family that bought a freezer, there were dozens who didn't. Today there are millions of financially able persons who still haven't bought one.

Why? A likely reason is that the wartime "food scarcity" technique of selling has back-fired. People who heard nothing about the home freezer's all-around peacetime usefulness came to think of it as only a "crisis product," filling a need that passed into oblivion with the rest of the war. Consequently it's hard for them to see any reason for buying a freezer today. So they hold onto their money.

Thereby hangs a lesson for the current crop of salesmen. They must be especially careful to promote the freezer as an appliance that does not only one task well, but many. A once-in-a-lifetime product that raises living standards, saves time and labor, pays for itself out of savings, and contributes to good health. Those selling points must be repeated CONSISTENTLY to impress them on the public mind.

The salesman who promotes the freezer, for instance, solely as today's answer to high prices is forgetting that sometime soon that particular problem won't beset the bulk of American families as it now does. Then how will they feel about the home freezer? Will their willingness to buy waver because they haven't heard the FULL STORY? Not if every salesman follows a day-in, day-out policy of telling it! That's the only way to bag sales from those on-the-fence prospects.

The wartime, peacetime, all-the-time usefulness of the home freezer is the big sales-clinching argument. It should be driven home with every ounce of energy that specialty salesmen can muster.

If You Need Some Reasons for Attending the Show—Here They Are

'Couldn't Match It With 6 Months Travel'

"If a man were to take off six months and travel the length and breadth of this land and visit all the manufacturers of refrigeration equipment, he could hardly learn more about this industry than he will be able to get at the All-Industry Show.

"Here in one hall will be displayed products of not just one or two manufacturers, but actually the display of the whole industry. Here is an opportunity to become 'up to date' in the biggest and fastest growing industry in the country."—J. F. DAILEY, president, Typhoon Air Conditioning Co.

'Will Help Individual Chart Future Course'

"Regardless of what part a man plays in the refrigeration and air conditioning industry, it will be well worth his while to visit the coming Rema Show in Atlantic City. Designing engineers, service engineers, contractors, wholesalers, distributors, architects, and equipment manufacturers will not only get a complete picture of the industry as a whole, but with the coordinated opinion of the other members of his particular group will be able to predict more accurately what the future has in store as their particular share of the industry."—J. A. RODGERS, president, White-Rodgers Electric Co.

'Unfair to Yourself If You Pass Up Opportunity'

"It seems to me that anyone in the refrigeration industry, whether he is a serviceman, contractor, dealer, wholesaler, or manufacturer should be interested in keeping up with all new developments in the industry. There is no place in the world other than at the All-Industry Refrigeration and Air Conditioning Exposition where all of the newest refrigeration products and equipment may be seen at one time at one place.

"Whether a person's interest is in buying, installing, servicing, designing, or selling, there is plenty for him to see and do. Competitive equipment can be compared, and information of unlimited value can be obtained by seeing the exhibits and talking to factory men.

"Also, other benefits can be derived merely by associating with others in the industry, who will be attending the Exposition, through an exchange of ideas in informal meetings and discussions. Anyone passing up such an opportunity is not being fair to himself nor to the company for which he works."—H. F. SPOHRER, vice president, Sporlan Valve Co.

'Up-To-Minute Data Is Essential To Success'

"To be successful in any branch of industry, up-to-the-minute informative education is essential, and we believe that the best and most pleasant way for us to view the many varied industrial advancements and new products in the shortest period of time is to attend the 6th All-Industry Refrigeration and Air Conditioning Exposition."—HENRY STEINHORST, president, Emil Steinhorst & Sons, Inc.

'Is Really the First True Post-war Showing'

"We feel that the coming 6th All-Industry Refrigeration and Air Conditioning Exposition will be the first true post-war exhibit of our industry. We all referred to the Cleveland Show as such, but actually the products shown were the results of manufacturers' hurried efforts to make products available to the consumer as quickly as possible after the war. In the interim period since the Cleveland Show I am certain we have all had the opportunity to crystallize the results of our development and research thinking, to the end result of now being able to offer products which will incorporate the thinking of many, many years when consumer production was impossible."—F. G. COGIN, manager, Refrigeration Div., Detroit Lubricator Co.

If you're having trouble convincing yourself or your wife that you can take the time to go to the All-Industry Refrigeration & Air Conditioning Exposition, we suggest that you read this page.

It is a symposium of well-thought-out expressions by industry executives on why anyone who has an interest in the refrigeration and air conditioning industry should attend the Show. These are not the opinions of those who are merely promoting the Show—but of men who are interested in seeing the industry—and individuals connected with it—grow and prosper.

'A Job That Could Not Be Done Any Other Way'

"We believe that the refrigeration show offers us the best opportunity of contacting the large number of refrigeration dealers and distributors who ordinarily would not be contacted by our field organization. This gathering of so many members of the industry serves to acquaint our field men with new potential customers and thus enlarge their possible sphere of operation.

"A gathering such as this also permits us to display our complete line of equipment and present new models thus doing a job which could not be done in any other manner."—JAMES J. GOODWIN, sales manager, Eastern Division, Temprite Products Corp.

'No Daily Pressure'

"We think the coming Sixth All-Industry Show is of vital importance to manufacturers of refrigeration equipment and component parts for it is the only opportunity we have of seeing many of our customers in one place and an opportunity to discuss our products with them without the pressure of daily business."—E. A. VALLEE, executive vice president, Automatic Products Co.

'2 Years Since Last Show'

"We feel that attendance at the 6th All-Industry Show is very important because of the many new items which will be on display this year. It has been practically two years since our last All-Industry Show and there will, no doubt, be many new sales ideas to help in the competitive market."—C. H. BENSON, assistant vice president, The Imperial Brass Mfg. Co.

'A Must for Those Who Keep Up-To-Date'

"While it has always been just plain 'good business' for everyone in the refrigeration and air conditioning field to attend All-Industry Expositions, it is a MUST this year for those successful individuals who know the value, in these competitive times, of being up-to-date on new equipment, new developments, and modern selling methods."—H. C. MORRISON, vice president, Curtis Refrigerating Machine Div., Curtis Mfg. Co.

'Inexpensive Way To Learn'

"As this is the first All-Industry Show to a buyers market in some time, exhibitors will concentrate on new equipment, new procedures, and new ideas, designed to help the serviceman, wholesalers, or contractors. Attendance at the Show is an inexpensive way to learn all new developments."—A. M. COLE, assistant sales manager, Standard Products Section, E. I. du Pont de Nemours & Co.

'Get Accurate & Current Product Development Data'

"The 6th All-Industry Exposition to be held at Atlantic City in November is, in our opinion, the most important public event associated with the refrigeration and air conditioning industry this year. It enables manufacturers, wholesalers, and dealers to obtain accurate and current knowledge of product development, application advancements, and merchandising methods with the least expenditure of time on the part of all concerned. Although it has been stated that comparisons are odious, we believe that it is absolutely necessary for the dealer in particular to compare the products of each manu-

facturer so that he can serve his customers, the ultimate user, with the best products available, and thus promote his own reputation."—H. BLAKE THOMAS, vice president, McQuay, Inc.

'Inspect and Discuss New Products Firsthand'

"This event offers electric refrigeration and air conditioning equipment manufacturers an excellent opportunity to present their latest products and to become better acquainted with industry developments and improvements in related or similar lines offered by others. The Show brings business principals together at a time when plans are being formulated by many fixture manufacturers and distributors who represent potential customers. Our products can be inspected and discussed first-hand with a wide group of industry people during the comparatively short period of a five-day show."—J. W. BOSTWICK, sales manager, Servel Inc.

'The One Opportunity To See and Compare'

"We feel that this is the most outstanding event in the refrigeration industry and have already discussed this Exposition with our larger distributors and invited them to attend. Without exception these distributors are planning to visit the Exposition and we will, of course, extend to our entire dealer and distributor organization an official invitation. This is the one opportunity that refrigeration dealers, jobbers, and distributors have to compare practically all standard makes of refrigeration equipment and in our opinion every alert refrigeration merchant should avail himself to this opportunity."—AUBREY A. DAVIS, vice president, Wilson Refrigeration, Inc.

'Solves Problems Better Than By Correspondence'

"With the change from a seller's to a buyer's market, manufacturers are striving for new developments and improvements. Most of these will be displayed at the Show.

"The Exposition also offers an opportunity to meet factory personnel and to clear up any problems which are often difficult to solve through correspondence. It also offers an opportunity to contact and compare notes with other men who have parallel businesses in other sections of the country."—S. CHARLES SEGAL, Kramer Trenton Co.

A Check on Values

"One important reason for the dealers attending the Show is to see presented the many new products of manufacturers. Everyone, now-a-days, is price conscious and many manufacturers have been concentrating on producing equipment at a low cost. It is, therefore, important for the dealers to see the new products and compare prices and quality."—A. RAYMOND, president, Victory Metal Mfg. Corp.

Demonstrates Values

"We believe that the Exposition affords us an opportunity to get quick coverage of a large number of live prospects for our equipment. We have some important innovations to display and certainly any selling presentation is more impressive when the actual equipment can be demonstrated."—W. A. BOONE, assistant sales manager, Bell & Gossett Co.

A First Look at Values

"We feel that the importance of this Show cannot be over estimated. The opportunity of bringing out for the first time the various new products of the industry is invaluable, and we are sure the refrigeration men planning to attend must be eagerly anticipating the change to take a look at these new products and hear all about them."—G. R. ALLEN, general sales manager, Superior Valve & Fittings Co.

Take any temperature from minus 40 to plus 55 or more... or any capacity from a half-ton to two and a half tons... the Model 205-C will handle them all *without adjustment*. That's tremendous versatility you'll find only in an A-P Thermostatic Valve. To the service engineer, this means carrying a *single valve* to take care of every kind of installation from sub-zero ice cream hardening to food freezing, food storage and dispensing, display boxes, walk-in coolers, water coolers — to air conditioning!

A-P DEPENDABLE
Refrigeration Values
STOCKED AND SOLD BY GOOD REFRIGERATION WHOLESALESAERS EVERYWHERE... RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS.

And with the A-P Model 205-C Thermostatic Expansion Valve you can expect supersensitive response to smallest pressure change, "straight-line" superheat control, and the steady dependability that boosts your reputation on every job. The famous A-P Liquid Charged Power Element is only one of many reasons for this leadership.

Be sure to use the A-P Model 205-C on *your* installations — from 1/2 ton to 2 1/2 tons capacity. It is available in three orifice sizes, .062, .110, and .160, at your favorite refrigeration wholesaler. Write for bulletin E-111.

AUTOMATIC PRODUCTS COMPANY

2430 North Thirty-second Street, Milwaukee 10, Wisconsin
Export Department, 13 East 40th Street, New York 16, N. Y.

What's New

Portable Tachometer Is Continuous Indicator



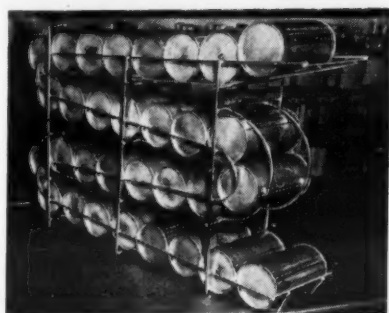
PHILADELPHIA—The new portable M1200-F electric tachometer and cutmeter just introduced by the Electric Tachometer Corp., 2218 Vine St., here, is said to assure accuracy of better than $\pm \frac{1}{2}$ of 1% of full scale value in measuring either surface speeds in f.p.m. or shaft speeds in r.p.m.

This accuracy is maintained at both low and high speeds over the entire range of from 0 to 5,000 f.p.m. or 0 to 25,000 r.p.m. Since generating and indicating instruments are separate, absolutely steady readings can be obtained even under adverse conditions. Also, the Model M1200-F makes possible a continuous indication so that speed changes or varia-

tions can readily be observed.

The tachometer is completely self-contained and requires no batteries or other external power source. It consists of a precision-built d-c magneto generator that produces a voltage directly proportional to the speed being measured, calibrated in conjunction with an easily-read laboratory type indicator of four speeds.

Beer Rack Has Place In Self-Serve Cabinets



OAKLAND, Calif.—Production of a new streamlined, self-service beer rack is announced by Metal Products Co., 1135 Third St., Oakland.

The new rack, known as "Serv-All," was designed for store reach-in refrigerators and counters. It is claimed to eliminate stacking of beer on shelves and counters.

New Device Doubles as Vaporizer & Humidifier



PARIS, Ky.—The first 3 to 24-hour Electresteam vaporizer that serves as a room humidifier and deodorizer has been introduced to retail for \$5.95 by Electric Steam Radiator Corp., according to Roy R. Fisher, Sr., president.

With a split-second steam action, the Electresteam vaporizer and humidifier has the added feature of automatic shut-off that cuts off the electricity when the water has evaporated.

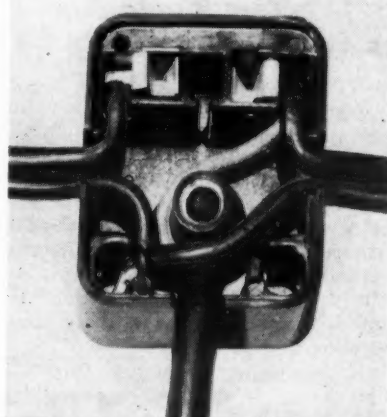
Exclusive safety features include a remote water reservoir. Should the vaporizer be accidentally knocked over, the water in the reservoir cannot scald or burn. In the unit, itself, there is never more than 1 oz. of boiling water.

The unit comes complete with 6-ft. cord and moulded rubber plug, and a detachable vapor cup for medication. It weighs 3 lbs.

Junction Block Designed For Freezers, Refrigerators

MILWAUKEE—The United Mfg. & Service Co. here has designed and developed a new thermosetting phenolic electric junction block called "Nu-Blok, Jr.," which provides a new disconnect junction for wiring of freezers, refrigerators, water coolers, electric roasters, ranges, etc.

Nu-Blok, Jr. contains an outlet for standard attachment cap assembled to lead extending from sealed or open type compressors to facilitate quick



service in the field. Block can be used to plug in lighting circuit, fan lead, or other cords pre-assembled to components too large to pass through partition apertures.

Another important feature is the unique "shortproof" method of isolating splices in three segregated wells. Short-circuiting due to faulty soldering or stray strands is thereby substantially eliminated.

Outside dimensions are 2 x 1 1/4 x .850 in. Brass eyelet secures laminated phenolic cover and serves as channel for a No. 10 mounting screw or bolt. All parts conform with Underwriters' dimensional, dielectric, and heat resistance standards.

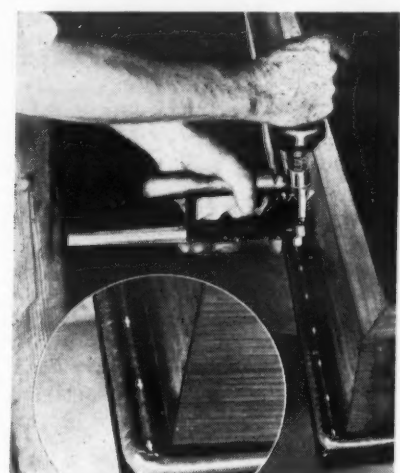
'Checktrol' New Portable Heating Control Tester



MILWAUKEE—The Perfex Corp., manufacturer of automatic temperature controls, has introduced a new, portable control tester to be known as the Perfex "Checktrol."

This unit will enable Perfex distributors as well as key dealers to provide their customers with a fast, accurate means of checking the operation of not only Perfex, but other makes of domestic heating controls. This will eliminate the necessity of returning any but actually defective controls for repair or replacement.

According to Idwal Parri, Perfex service manager, a high percentage of controls now returned to the factory are found to be without defect.



Hand-Operated Nailer Fastens Door Gasket

EVANSTON, Ill.—An automatic, hand-operated nailing machine has been especially designed to fasten securely refrigerator gaskets. The machine, the "Automatic Spot-Tacker No. X77," is manufactured by Spot-nails, Inc., here.

One blow of the fist or rubber mallet drives a wide, flat staple that does not cut or pull through the gasket, the manufacturer claims.

A special driving head permits the operator to drive the staple into the narrow space in back of the gasket. A quick-loading magazine holds extra long sticks of staples to provide uninterrupted production.

Collapsible Stand Made For Portable Ironers



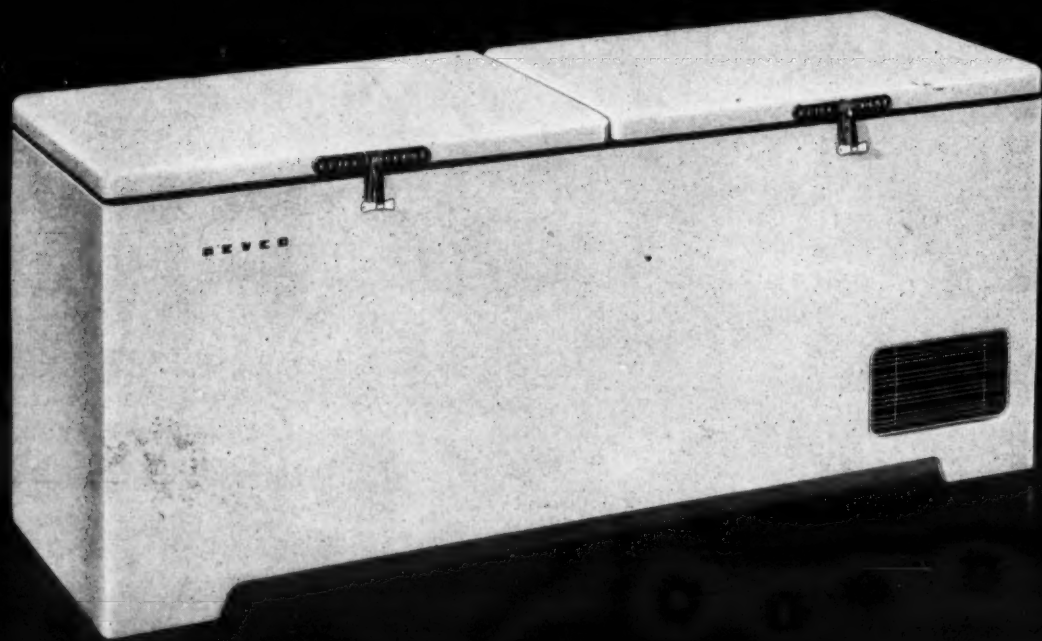
DES MOINES, Iowa—A metal, collapsible stand for portable ironers is being manufactured by Allied Industries Inc., 1220 Grand Ave. here.

According to Herb Hieb, sales manager, the stand has proven to be an excellent sales stimulator as a premium with the portable ironer. He added that Conlon Div., Conlon-Moore Corp.; Armstrong Products; and Horton Mfg. Co. are using the stand as a premium item with the sale of their portable ironers.

The stand consists of two U-shaped rods joined so that they open scissor-fashion. The portable ironer is attached to the top rods, which are connected by two canvas straps to prevent the stand from opening too far. The stand has two wheels and two rubber capped feet so that it can be easily moved.

The stand places the ironer at a convenient height so that the operator can sit down while ironing. List price has been established at \$9.95.

Announcing THE NEW Revco SUPER HEAVY DUTY CHILL CHEST



Dollar for Dollar... Feature for Feature... this New Revco SUPER Heavy Duty, 19.5 Cubic Feet, Chill Chest is the perfect answer to ever increasing demand for larger storage capacity in a home food freezer. This new Super Heavy Duty Chill Chest is a gleaming-white beauty, compact, and a floor space saver.

It provides for over 780 pounds of food storage. Compare any REVCO product and you'll see why REVCO has that "treasured" consumer acceptance appeal... Make it your profit line too! Easier to sell... less service... WRITE or WIRE for Complete Information.



Revco INC. • DEERFIELD, MICHIGAN
NATIONAL DISPLAY SPACE—1454 MERCHANDISE MART—CHICAGO

Emery Thompson ICE CREAM FREEZERS AND HARDENING CABINETS

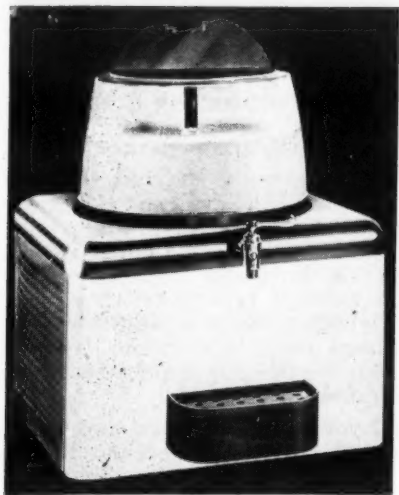
Be sure to see our profitable and complete line.

BOOTH NO. 428-30

Emery Thompson MACHINE AND SUPPLY CO.
PIONEERS IN ICE CREAM FREEZER DEVELOPMENT FOR OVER 40 YEARS
1349 Inwood Ave., New York 52, N. Y.

What's New (Con't)

Beverage Always Visible In Majestic Dispenser



BEVERLY HILLS, Calif.—Full production on the Majestic refrigerated beverage dispenser, model 120, is now under way, according to A. Perneti, president of Majestic Enterprises, Inc., 9018 Olympic Blvd. here.

Prime feature of the model 120 is its transparent Plexiglas bowl. Inside the bowl is a stainless steel revolving paddle that keeps beverages in constant agitation and assures uniform drinks.

The transparent bowl, which holds over 5 gals. of liquid, keeps the beverage in full view of customers. This factor has proved to be a powerful sales stimulant for the beverage, according to Perneti.

The Majestic dispenser is thermostatically controlled to maintain a constant temperature of 34° F. It is powered by a self-contained, hermetically sealed condensing unit.

The cabinet has sides of baked white enamel and top of highly polished stainless steel. The drip pan and trimmings come in green plastic. Any other color may be obtained on quantity orders. The faucet is of chrome-nickel.

Plastic Parts Trays Have Adjustable Compartments



CHICAGO—A new combination of metal shelf racks and two different sizes of plastic trays designed to provide orderly storage and identification of small parts in a minimum of space has been announced by Andrew Technical Service, 4747 N. Damen Ave., Chicago 25.

A complete unit consists of a steel shelf section 34½ in. wide, 14¾ in. high, and 11¾ in. deep. It is equipped with as many as 56 plastic trays, each tray having four removable

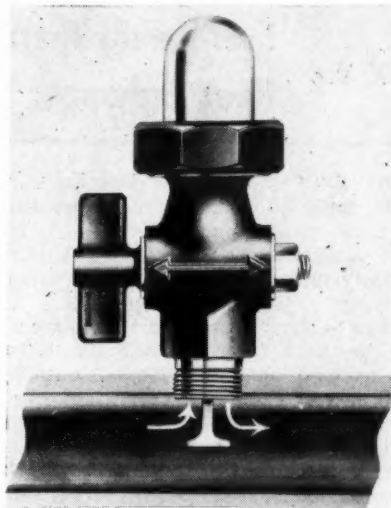
partitions providing five flexible compartments for the storage of an infinite variety of small parts.

Individual shelf sections can be stacked atop one another to any desired height. They are designed to fit into standard metal shelving.

The two different sizes of trays measure 11¾ in. by 2 in. by 2¾ in. and 11¾ in. by 3¾ in. by 2¾ in. Trays are molded transparent Polystyrene. An index card slot and molded-in finger pull is located at the front of each tray. Blank indexing cards are included. These can be slipped in behind each partition for identification of contents.

Either complete units or separate trays can be purchased at moderate cost, according to the producer. Complete details are given in Bulletin 520 available from Andrew Technical Service.

Sight Glass Indicates Clarity of Liquids



HARRISON, N. J.—The clarity or turbidity of transparent liquids flowing under pressure through pipe lines can now be observed by means of a valve type sight glass, designed and manufactured by Worthington Pump & Machinery Corp.

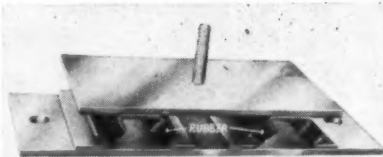
Differential pressure is established across the deflector to allow some of the liquid to circulate continuously through a glass observation bowl. A special feature is provided by the valve which permits the removal of the observation bowl for cleaning.

Originally designed for observing the clarity of hot water passing through Worthington hot process water treating systems, the valve type sight glass can be used in any system through which transparent liquids flow.

Rubber-In-Shear Principle Used In Vibration Mount

NEW YORK CITY—The new "Finnflex" CM-H vibration mount manufactured by Finn & Co. here, provides a method of isolating machinery vibration.

It is designed for use with precision grinders, lathes, generators, pumps, compressors, jig borers, and other installations where horizontal



and rotary machinery vibrations are present.

Vibration isolation and attendant

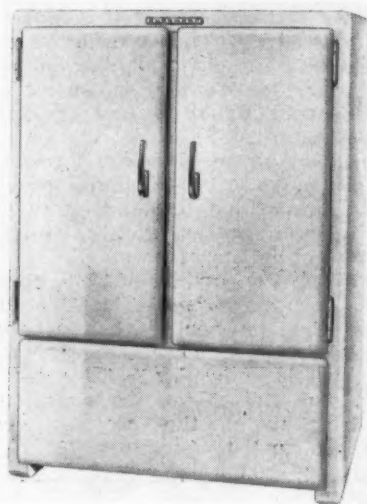
noise reduction is accomplished through the "rubber-in-shear" principle. It consists of a specially-designed steel channel floated in rubber between two steel angles.

CM-H isolators, with ample surface mounting areas, reportedly afford uniform deflection and a load range from 600 lbs. to 10,000 lbs. Over-all height is only 2 in.

Each unit is drilled and tapped, and ready for use.

Further information may be obtained by writing to Finn & Co., 2850 Eighth Ave., New York 30, N. Y.

New Hussmann Reach-In Features Hermetic Unit

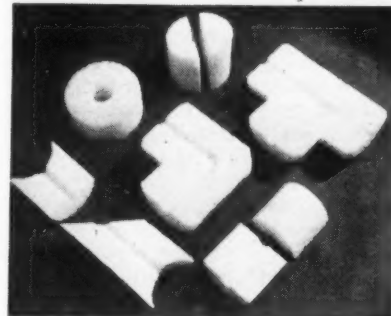


ST. LOUIS—Hussmann Refrigeration, Inc., here, manufacturer of all types of refrigeration equipment for food stores, has announced the addi-

tion of a line of self-contained reach-in refrigerators with hermetic condensing units.

These hermetic condensing units carry a five-year warranty. This new line of reach-ins is available in 16, 25, and 35 cu. ft. and is available for immediate delivery.

New Pipe Insulation Simple To Apply



COLEMAN, Mich.—A new light weight pipe and vessel insulation, known as "K-Shield," has been developed by Robinson Industries here.

The development is especially suited for cold pipe insulation, and application consists of a simple covering procedure.

K-Shield is made of Styrofoam, an expanded plastic containing thousands of minute closed-wall cells. Although it is airy looking and extremely light (weighing approximately 1¼ to 1½ lbs. per cubic foot), it is claimed to be a highly workable rigid material which is its own moisture barrier.

This new type insulation presents

little difficulty in field installation since it can be cut and fitted rapidly.

To date, K-Shield insulation is being used in cold storage units, chemical processing plants, oil refineries, and in special applications.



A One Man Hand Operated Loader

- 50% SAVINGS IN LABOR
- LOAD CAPACITY 600 LBS.
- FITS ANY PICK-UP TRUCK
- EASILY INSTALLED

Deluxe Model Shown Above

\$11975

(F. O. B. Los Angeles)

VENCO VEN CORP.

2828 Newell St., Los Angeles 26, Calif.

The New Ice-O-Magic FULLY AUTOMATIC ICE MACHINE

The machine
you have been
waiting for

¾ h.p. water
cooled compressor

Capacity up
to 700 lbs.

Crystal clear
solid ice cubes

Saves up to
90% on ice
bills

Ice for as low
as 8¢ per 100 lbs.

Storage capacity
for 200 lbs.
ice cubes

Size of gleaming
white cabinet
40 inches high
29 inches wide
will fit under any bar

Solid crystal
clear ice cubes
1½ oz. in weight

For
bars, restaurants,
hotels, hospitals,
drugstores, motels,
taverns, etc.

Introduces

a revolutionary new method in Ice Cube Making—produces a new type of water-washed CRYSTAL CLEAR SOLID pure ice cubes when you want them, where you want them—the kind you've always wanted. No more sticking together of ice cubes due to our patented freezing method.

DISTRIBUTOR FRANCHISES AVAILABLE

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Pres-Sure-Test

FINDS ALL LEAKS QUICKLY

IT'S A LIQUID—EASY TO USE—SAVES TIME AND MONEY

With PRES-SURE-TEST you eliminate the use of torches, smelling, brush and soap, trick gadgets, and other out-moded methods of checking for leaks in lines, connections, containers, valves, etc.

Get PRES-SURE-TEST today and do your testing the easy way. It's Positive—Eliminates Guess Work—Proven by Thousands of Tests and Users.

Get PRES-SURE-TEST and be sure!

It's packaged in convenient tool box sized cans with brush top. Per 8 Oz. Can (Sample) 50¢—Per Case 1 Doz. 8 Oz. Cans \$6.00. Per 1 Gallon \$1.75—Per Gallon in Drum Lots \$1.45. All prices F. O. B. Detroit.

PALMER PRODUCTS INC.

18639 WEAVER
DETROIT 28, MICHIGAN

Some Carrier Units Will Warm Polar 'Cold Rooms,' Others Will Cool Summer 'Heat'

SYRACUSE, N. Y.—Far into the Land of the Midnight Sun—800 miles north of the Arctic Circle—air conditioning equipment will soon be installed to preserve the food supply of a thousand people who are literally shut out from the world for nine months of the year.

The community, comprising employees of the Norwegian Coal Mining Co., and their families, is aptly named Long-Year City and is located in Spitsbergen.

Through contracts with the International division of Carrier Corp., equipment for low temperature refrigeration in a huge blast freezing tunnel, for normal refrigeration levels in storage rooms, and for heating units to prevent freezing of perishable fruits and vegetables, will be shipped to the isolated city.

The Island of Spitsbergen extends from 77° to 88°N. Latitude and its southern extremity is 500 miles north of the northern tip of Norway. The island is completely frozen-in nine months out of each year and exchange of goods with the outside world is almost impossible.

All supplies for the community are brought in by ship during the three months the port is open each year. It is necessary, therefore, that sufficient food be brought in during these three months, and preserved, to care for the needs of the employees during the complete year.

Meat is shipped in whole carcasses from northern Norway. Upon arrival, the meat, as well as fruit, vegetables, and fish, has been cooled by the

summer air to a temperature of approximately 40° F.

When the new plant is finished, meat and fish will be frozen in a blast freezing tunnel as soon as they are unloaded from the ship. They will then be placed in separate storage rooms and held at low temperatures until used.

Fruit and vegetables will be unloaded directly into another set of storage rooms designed to keep them fresh the year-round. Because of the extreme cold encountered in Spitsbergen, heating equipment will be provided to keep the temperature in the fruit and vegetable storage rooms from dropping too low during the winter.

Cooling will be provided in the brief summer by the Carrier equipment. The winter temperature in Spitsbergen frequently falls as low as -48° F.

The refrigeration system is composed of three refrigeration plants; one plant serving the blast freezing tunnel, one serving two separate storage rooms for fish and meat, and one serving the vegetable and fruit storage rooms.

Carrier heat diffusers will be supplied for high temperature requirements. The refrigeration equipment includes two large capacity compressors, two marine type condensers, six cold diffusers, and one medium capacity condensing unit.

The Spitsbergen contract was completed by E. T. Andersen, Carrier International division representative in Norway.

COLD DRINKS

Air Conditioning Keeps Cocktail Lounge at 70°

PANAMA CITY, Fla.—Deliberately "overpowering" air conditioning to the point that it keeps the lounge at 70° F. despite torrid outside heat, has been the means of building up a tremendous increase in volume for the cocktail lounge of the Hotel Dixie-Sherman here.

The cocktail lounge, seating 65 patrons, is the only air conditioned bar in this section of northwestern Florida, and actually, the only air conditioned space in the hotel.

With the northwestern Florida summer extending far into October, and with the thermometer hovering in the 90's for eight months out of the year, the Dixie-Sherman hotel management found air conditioning a "selling must."

Ordinary air conditioning, however, did not make any particular impression upon patrons, inasmuch as there are many air conditioned stores, clubs, etc., in the area.

Early in the summer of 1949, however, the management decided to make the air conditioning of the cocktail lounge something "everybody would remember." To accomplish this the 25-ton York system which provides the cooling was "stepped up" to maintain 70°.

No Hot Foot In This Shoe Shop

ROCHESTER, N. Y.—An air conditioning system has been installed in the newly opened De Luxe Shoe Shop at 477 Monroe Ave. here.

Q. Should Thermal Expansion Bulb Be Located On Outlet Side of the Heat Exchanger?

Readers who have questions concerning applications of air conditioning or refrigeration equipment are invited to pass them along to AIR CONDITIONING & REFRIGERATION NEWS, which has made arrangements with James J. LaSalvia, author of the *Key to Air Conditioning*, to supply the answers free of charge.

When sending in the question, readers should furnish as much data about the problem as possible so the answer given can be specific.

Standard, Inc.
Baton Rouge, La.

Editor:

We have a question concerning low temperature installation and would like . . . an answer as soon as possible.

We are installing a two-stage system designed to hold approximately -35° F. in the cold storage room. Gas temperature would be approximately -50° F. Normally we would locate the heat exchanger outside the fixture, that is, outside the cold storage room.

However, we would like to know if you have had any actual experience as to whether locating the thermo expansion bulb on the outlet side of the heat exchanger is the best practice for this type installation; that is, whether the comparatively high ambient room temperature (110° to 115°) would materially affect its operation.

If you have any better suggestions for the heat exchanger and thermo bulb location, please let us know.

GEORGE S. COX

A. Positioning Thermal Bulb In Discharge of Heat Exchanger Tends To Keep Valve Open

Dear Mr. Cox:

In reply to your letter concerning location of thermal bulb on a -35° F. low temperature installation, I personally have found in my experience that the following worked well.

The heat exchanger in this particular problem where -35° F. is to be maintained, should be located outside of this low temperature cold storage room. It is best to locate it in an adjacent cold storage room where higher temperatures of 30° to 50° F. are carried.

The thermal bulb should be located

about 1 ft. from the cooling coil on the suction line. The expansion valve in this case should be one of minimum superheat.

I would not recommend placing the thermal bulb in the discharge of the heat exchanger as you suggest, as this would tend to keep expansion valve open continuously and run wild. The result would be a continuous flooded coil and slugs of refrigerant would be carried back to the condensing unit, which eventually will mean trouble.

JAMES J. LASALVIA

New Booklet Describes Removal Of Paint Particles from Air

MADISON, Wis.—A new eight-page booklet just released by Research Products Corp. here describes application of the company's air-cleaning equipment to industrial paint spray installations.

The booklet explains that the firm has developed a system whereby the paint particles can be removed from the air with arrestor pads.

The booklet may be obtained by writing to Dept. LD, Research Products Corp., Madison, Wis.

Dealer's Move Triples Space

SPRINGFIELD, Mass.—Murray Satell Co., Inc., 15-year-old electrical and gas appliance dealership, set Oct. 15 as the date for moving from 493 Worthington St. to 1232 Main St., where three times as much space will be available.

Pig Hatcheries May Soon Hog New Market for Air Conditioning

NEW YORK CITY—A new market for air conditioning looms on the horizon. It's the pig hatchery.

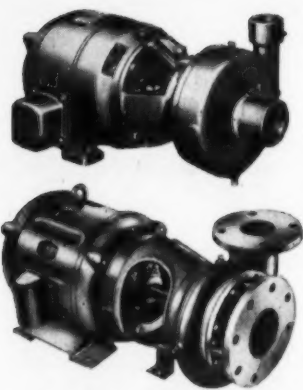
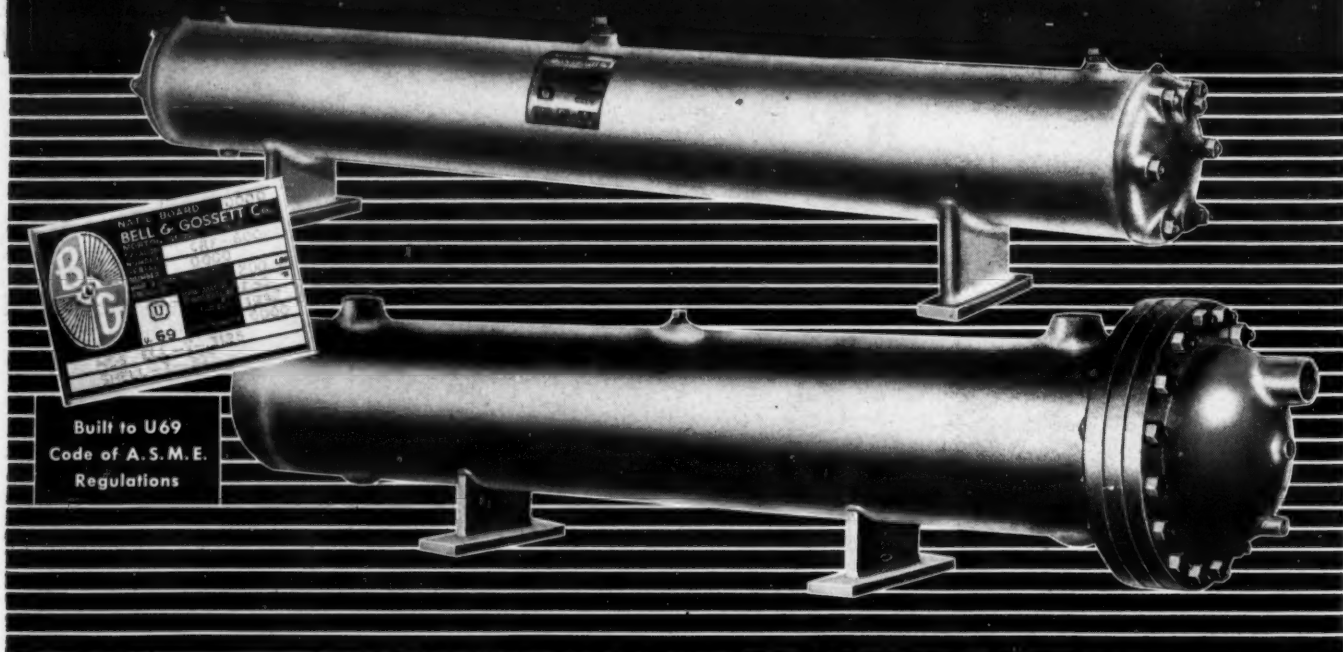
Meat packers, it seems, are casting about for some method of leveling out the sharp hills and valleys of the hog marketing business.

One possible solution being explored is an air conditioned and radiant heated hog hatchery—similar to the commercial chicken hatchery—where sows can bear litters the year-round, instead of just in the spring and fall.

If this could be accomplished, it is expected to cut deeply into storage expenses for packers, produce meatier hogs, cut pork and ham prices, and make everybody happy.

One unidentified meat packer is said to be planning to build such an air conditioned hatchery at a cost of \$100,000.

Refrigeration Equipment



B & G CENTRIFUGAL PUMPS

These pumps will satisfy your closest appraisal. Made in a wide range of capacities with open and enclosed impellers. Illustrated are Series 1522 and 1531 Pumps, featuring a Mechanical Seal which eliminates stuffing box drip. Write for engineering data—you'll appreciate the outstanding design and sturdy construction of B & G Centrifugal Pumps.

Even casual examination will reveal why B & G Refrigeration Equipment is meeting the approval of the most critical engineers and operating men. Here's new and better design—sound construction—painstaking workmanship—all combined in units of peak efficiency and long-lived dependability.

Tube sheets, for example, are serrated—assuring leak-proof operation. The ingenious design of B & G Evaporators permits uninterrupted vapor and oil flow—prevents oil-trapping in the head passes. Many other refinements reflect the skill developed in over a quarter of a century in building fine heat transfer equipment.

B & G Refrigeration Equipment is a warranty of top performance—use it on your next job.

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REFRIGERATION EQUIPMENT
BELL & GOSSETT COMPANY
Dept. RBF-47, Morton Grove, Ill.

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AIR CONDITIONING UNITS & COILS

Newlywed Gift List Aids Promotion

Dealer Urges Bride's Relatives To 'Chip In' on Appliance

KNOXVILLE, Tenn.—Encouraging a prospective bride to select a refrigerator or home freezer which she would "most like to receive as a gift" and then aiding her friends in buying it, is a clever stunt which is selling many additional appliances for the appliance department of Miller's department store here.

With high living costs making gift purchasing difficult, the emphasis today is entirely on practical, useful gifts, according to the store management—and the refrigerator representing one of the largest individual investments which newly-weds must make, has proven ideal for promotion on this basis.

The store maintains a Wedding Gift Service on the fifth floor with complete facilities for direct-mail advertising, a handy library of books helpful to brides in setting up their wedding, and housekeeping, and complete displays of gifts suggested by the store.

Included are major appliances, lined up against one wall, where a wedding gift counselor can demonstrate each to prospective brides and help them make a selection.

The prospective bride is given a card, on which she lists all gifts which she would prefer from friends and relatives, when the wedding day rolls around. The store fills out each

card carefully, listing the name of both the bride and prospective husband, and complete information on the groom's occupation and income for later followup.

When the gifts are listed on the bridal card in this way, the store keeps it handy for the benefit of wedding guests who drop around to purchase gifts. Refrigerators and other major appliances are aggressively suggested. The wedding gifts counselor takes the gift purchaser down to the appliance department where a complete selection is available. Frequently, several friends of the bride or groom are encouraged to "chip in" and accumulate sufficient funds for the purchase of a new refrigerator or automatic washer.

Where possible, if the store can obtain a list of relatives and friends, direct-mail is sent out, pointing out that the prospective bride has listed her gift preferences with the store, and offering every assistance in selecting them.

It is simple to obtain names of relatives, of course, once the prospective bride has registered—and the telephone book and telephone calls are all that is necessary to relay desired information to the relatives.

M. H. Fyler of Easy Dies

SYRACUSE, N. Y.—Millard H. Fyler, 45, production manager of Easy Washing Machine Corp., died of a heart ailment late last month. He was associated with the company for 27 years.

REMA Firms May Approve Industry Seal For Use on Freezers

WASHINGTON, D. C.—At a meeting of the Food Freezer Section of the Refrigeration Equipment Manufacturers Association held here recently, the name of the product section was definitely changed to "Food Freezer Section."

A number of motion pictures and slide films were reviewed, and it was decided that the group would sponsor either a colored motion picture or a colored slide film entitled, "A New Way To Live," which will be offered to colleges and high schools having home economic courses. It is also expected that these films, when completed, will be circulated through service clubs, churches, women's clubs, and other organizations.

The promotion is still in the planning stage, but it is expected to include a national contest among home economic students.

The section also expects to set up a speakers' bureau made up of its members who will give educational talks on the preservation of food through the use of food freezers before any interested groups.

Existing standards for food freezers will be studied by a committee consisting of W. L. Currie, Victor Products Corp. (chairman); Sven Swanson, Tyler Fixture Corp.; C. H. Beane, The Brewer-Titchener Corp.; Steven Frank, Jr., Whiting Corp.; and Raymond D. Pusey, Wilson Cabinet Co., Inc. A report will be made at the next meeting.

Upon adoption of the standard by

the Food Freezer Section, and subsequently by Rema, it is expected that an industry seal will be approved and used by all manufacturers who are members of the association, upon proper testing and approval of their various models.

Another subject discussed at length, and upon which mutual experiences were exchanged, was the topic of insurance covering food spoilage and mechanical failure.

The next scheduled meeting of the section is set for Jan. 9, 1950.

Store Encourages Patrons To Put Appliance Savings In Free Toy Bank

PHILADELPHIA—Instead of offering visitors to the new store the usual door prize of some appliance, the Barney Roth Appliance Co. store at 211 N. Broad St. here, presented each with a toy bank to be used for saving coins toward the purchase of a refrigerator or other appliance.

A full-page newspaper advertisement was utilized in the Philadelphia Inquirer offering 1,000 miniature banks to the first 1,000 people visiting the store. As each housewife entered the store, she was presented with the toy bank. At the same time it was suggested that she use it as a means of saving money for future appliance purchases.

"With most people thoroughly familiar with the meter-payment purchase plan now prevalent throughout the area, we are certain that many of the housewives will thus utilize their banks for this purpose," Joe Rosen, executive of the firm said.

Refrigerators, Freezers Continue To Sell Well In Chattanooga In August

CHATTANOOGA, Tenn. — After selling a record breaking 1,122 refrigerators in July, appliance dealers in this city of approximately 150,000 population followed up with the sale of 842 refrigerators in August, 29% more than they sold in August last year, reports by the Electric Power Board of Chattanooga indicated recently.

At the same time, home freezers maintained in August their 41 unit

sales total set in July, which was slightly better than their 1948 volume.

All other major appliances failed to meet the 1948 pace.

Only a few—water heaters, garbage disposers, freezers, and dishwashers were able to equal or surpass their July, 1949 volumes.

A breakdown of August sales by appliance with average unit price and total sales value follows:

Appliance	Units Sold	Average Unit Price	Total Sales Value
Refrigerators	842	\$ 269.95	\$227,297.90
Home Freezers	41	345.90	14,181.90
Ranges	565	238.63	134,825.95
Water Heaters	176	125.55	22,096.80
Ironers	16	169.73	2,715.68
Vacuum Cleaners	323	69.45	22,432.35
Clothes Washers	547	154.60	84,566.20
Clothes Driers	13	239.88	3,118.44
Dishwashers	6	354.43	2,126.58
Garbage Disposers	4	124.95	499.80
Air Conditioning Units	10	32,588.35	325,883.46
Refrigerators, comm.	11	596.73	6,564.00
Freezing Cabinets	1	450.00	450.00
Soda Fountains	2	1,854.50	3,709.00
Milk Coolers	47	315.80	14,842.78
Ice Makers, Water Coolers	1	165.00	165.00



BEAUTY in BALANCE

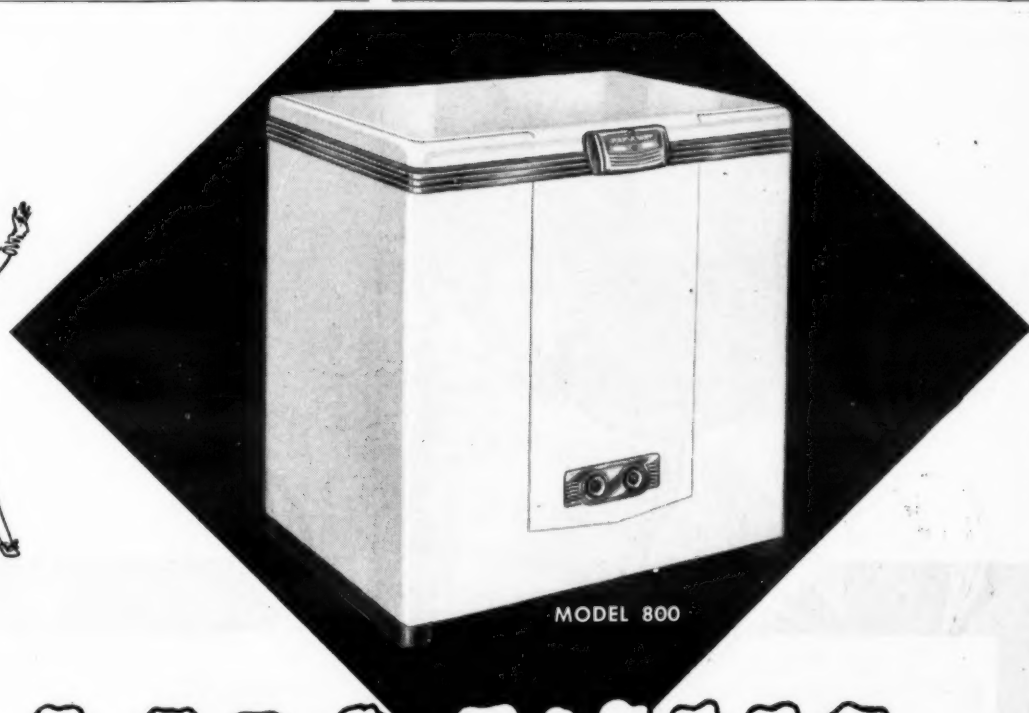
● It's true that good performance must be matched by good looks in today's competitive market. For the beauty of your product to be in balance, mouldings must be perfect. John Lees can supply your needs. We make thousands of standard shapes and special sections for decorative trim, frame assemblies, functional assemblies, channels and other applications. Mechanical or electrolytic polish. Write today for our catalog and our folder on electrolytic polishing.

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Kilgore Avenue, Muncie, Indiana, U.S.A.

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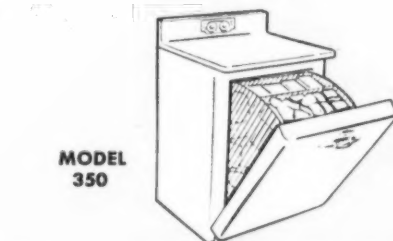
THE 6th ALL INDUSTRY REFRIGERATION AND AIR CONDITIONING EXPOSITION NOVEMBER 14—18



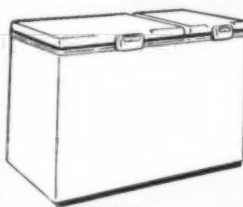
PAK-A-WAY

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Biggest Home Freezer Value Today

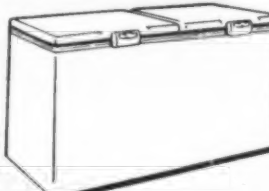


MODEL 350



MODEL 1500

There is a model to fit every need... each with many new and exclusive features that make PAK-A-WAY the most wanted freezer.



MODEL 2100

In every way, Pak-A-Way offers dealers the biggest value line, the most saleable line, in the industry... With four models, there's a size for every city or farm home need—each priced to face any and all competition... The line is packed with important selling features including 5 year warranty, 5 year food spoilage warranty, automatic bell alarm, baskets—all standard equipment... Outstanding quality construction is backed by Schaefer's twenty years experience in low temperature cabinet manufacturing... You should sell home freezers—you should sell Pak-A-Way, the de luxe line at standard prices! Write today for details of Pak-A-Way dealer franchise.

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Mfrs. of SCHAEFER Ice Cream Cabinets, CLEARVIEW Ice Cream and Frozen Food Merchandising Display Cabinets, PAK-A-WAY Home and Farm Freezers.

Preview

Many First Showings of 1950 Lines on Atlantic City Docket

Esco's New Freezer Has Air Blast Equipment

Two models, CL-12 and CL-24, of Esco Cabinet Co.'s newly-styled and designed "CL" freezer line in 12, 16, 20, and 24-cu. ft. capacities will be the main feature in booths 334-336.

Model CL-24, which will be exhibited for the first time, features the air-blast fan method for quick freezing in a large compartment.

The exhibit will also include the Esco "NI-AG-RA" Icy-Wall milk cooler and the Esco beverage cooler.

Company personnel scheduled to attend the show are M. B. Cann, vice president; R. R. Jamison; and Harold C. Cann, Charles M. Cann, E. L. Johnson, C. K. Jones, H. B. Sammons, and R. O. Washbon, district managers.

1950 Models To Be Shown By Baltimore Aircoil

In the booths occupied by Baltimore Aircoil Co., Inc. (330 and 332), visitors will see a 1950 model of the company's "CPE" type evaporative condenser and a type "U" condenser.

The CPE model, which is the outdoor type, has been completely redesigned to give "even greater sturdiness, accessibility, compactness, and efficiency," according to the company.

This type of condenser is built in sizes from 10 to 100 TR base rating. It is said to be an exclusive B.A.C. development and to feature "true counter-flow heat transfer of both air and water."

With regard to the type "U" condenser, the company said it is going to announce extension of this line up to 210 TR base rating in a single unit. B.A.C.'s "U" condenser is a universal type which can be used either for inside or outside installation.

John Engalitcheff, Jr., president; Ray R. Forseille, vice president in charge of production; and R. P. Franke, sales engineer, will be in attendance.

Many New Products for Varied Use In Brunner Setup

There'll be plenty of new products to inspect in Brunner Mfg. Co.'s space.

Booths 434-36-38-40 will house a new 8-cylinder compressor assembly designed for 40 to 75-hp. duty, 400 to 800 r.p.m.; new $\frac{3}{4}$ to 3-hp. electrically-driven truck condensing units for application with eutectic-type plate evaporators; new combination air cooled and water cooled condensing units from $\frac{1}{2}$ to 3 hp.; and new package air conditioners from 3 to 10-hp.

Announced features of the com-

pressor assembly are unloaded starting, step control of capacity, forced feed lubrication, oil failure protection, counter-balanced crankshaft, and "a host of features based on the companion compressors which cover the $\frac{1}{2}$ to 30-hp. capacities."

The truck condensing units are said to fit the compartments provided in 90% of current mobile equipment, "yet condensers are designed for low head pressures, receivers have 50% excess capacity, and the compressors operate at moderate speeds."

Speeds and hence capacities of the combination condensing units are higher than the corresponding air cooled units, according to Brunner.

"Thus," it was pointed out, "a Brunner combination $\frac{3}{4}$ -hp. unit may closely approach 1-hp. capacity in a straight air cooled unit. Water consumption is low and no water is used when the ambient temperature is below 80° F."

The company claimed it has designed the air conditioners for "low noise level, high refrigerating capacity, temperature regulation, humidity, and freedom from complaints."

Also to be shown is the firm's capacity control system which is said to have "increased the acceptability" of large Brunner units.

Brunner's field engineers will answer questions about the company's standard line, as well as the new products. The Brunner line ranges from $\frac{1}{4}$ to 75-hp.

Remco To Show How Items Perform In 'Real Life'

How do drier filters, standard duty driers, liquid indicators, and flare nuts perform under actual service conditions?

Visitors to the Remco booths will get a chance to see for themselves. Ken Newcum, president of Remco, Inc. indicates that his firm will bring along for these products a specially built demonstration unit which will be kept in operation for the duration of the show.

Other apparatus will show clearly and simply the amount of moisture removed and retained by molded Ducal Drierite, silica gel, and other drying agents under practical service conditions.

Big-emphasis item at the Remco exhibit will be the "Frost-Tite" flare nut which the firm backs with an "absolute" guarantee not to loosen, crack, or split.

Designed for lowside installation, these flare nuts are said to prevent ice which forms in the space between the nut and fitting from expanding in such a way as to crack or loosen the nut. By providing three forged frost-relief slots in the Frost-Tite flare nut, Remco gives the expanding ice a channel of escape so that it does not exert pressure against the sides of the nut.

Also on display at the Remco booth will be the heavy-duty "Cross-flo" drier filters and standard duty driers with spun ends as well as "E-Z-See" leakproof indicators with various flare and sweat connections.

Besides Newcum, Charles S. Pekich, assistant secretary of Remco, will be present at the Exposition plus the following factory representatives: Charles W. Wilmes, Arthur K. Johnston, Thomas E. Scott, Bert Paton, James E. O'Brien, Eugene Smith, O. E. Stevens, and Norman M. Dunning.

and sliding doors both top and bottom. The latter is an all-steel, sectional walk-in, porcelain clad on the exterior.

Bally personnel who will be at the show are Leon Prince, sales manager; Lee Saetle, eastern states sales representative; Lloyd Ledbetter, southwestern representative; Harry E. Johnson, national chain store representative; and Douglas G. Scheffey, Pacific Coast representative.

Many Bally distributors and dealers plan to combine a visit to the company's manufacturing plant at Bally, Pa., with their visit to the exposition, it was stated.

Door Hinges & Fasteners To Be Shown by Butcher Boy

Talk in the space of Butcher Boy Cold Storage Door Co. will center around newly-designed, shock-absorbing-type adjustable spring hinges and heavy-duty main door fasteners "expressly used for long-time service in cold storage plants where doors and hardware are subjected to hard usage."

Butcher Boy streamlined doors, standard and overlap type, will also be included in the exhibit in booths 856 and 858, "pointing to construction differences where doors are used at moderate as well as lower temperatures."

The company will be represented by George W. Slopa, general manager; Robert E. Slopa, of the engineering department; Joseph Willig, sales manager; and Ira E. McFarland, New York branch manager.

Catalog Styles & Pages Will Be In Owen Exhibit

Catalogs prepared for wholesalers of air conditioning and refrigeration parts, supplies and equipment will be shown for the first time at this year's All-Industry Exposition by Edward Owen & Co. On display in booth 229 will be samples of catalogs prepared for refrigeration wholesalers, showing the Owen Co.'s newly developed methods of preparing catalogs with separate, revisable price lists.

Libraries of catalog pages from which wholesalers can easily compile catalogs to meet their individual requirements will also be displayed.

Representing the company at the exposition will be: Edward J. Owen, president; and Will H. Knoerr, manager, refrigeration catalog division.

Tools—and Just Tools, Promised by Bonney

Reports Bonney Forge & Tool Works:

"Are we going to have Stripsy Rose or Miss Ice Chest of '49 in the booth?"

"No-o-o-o."

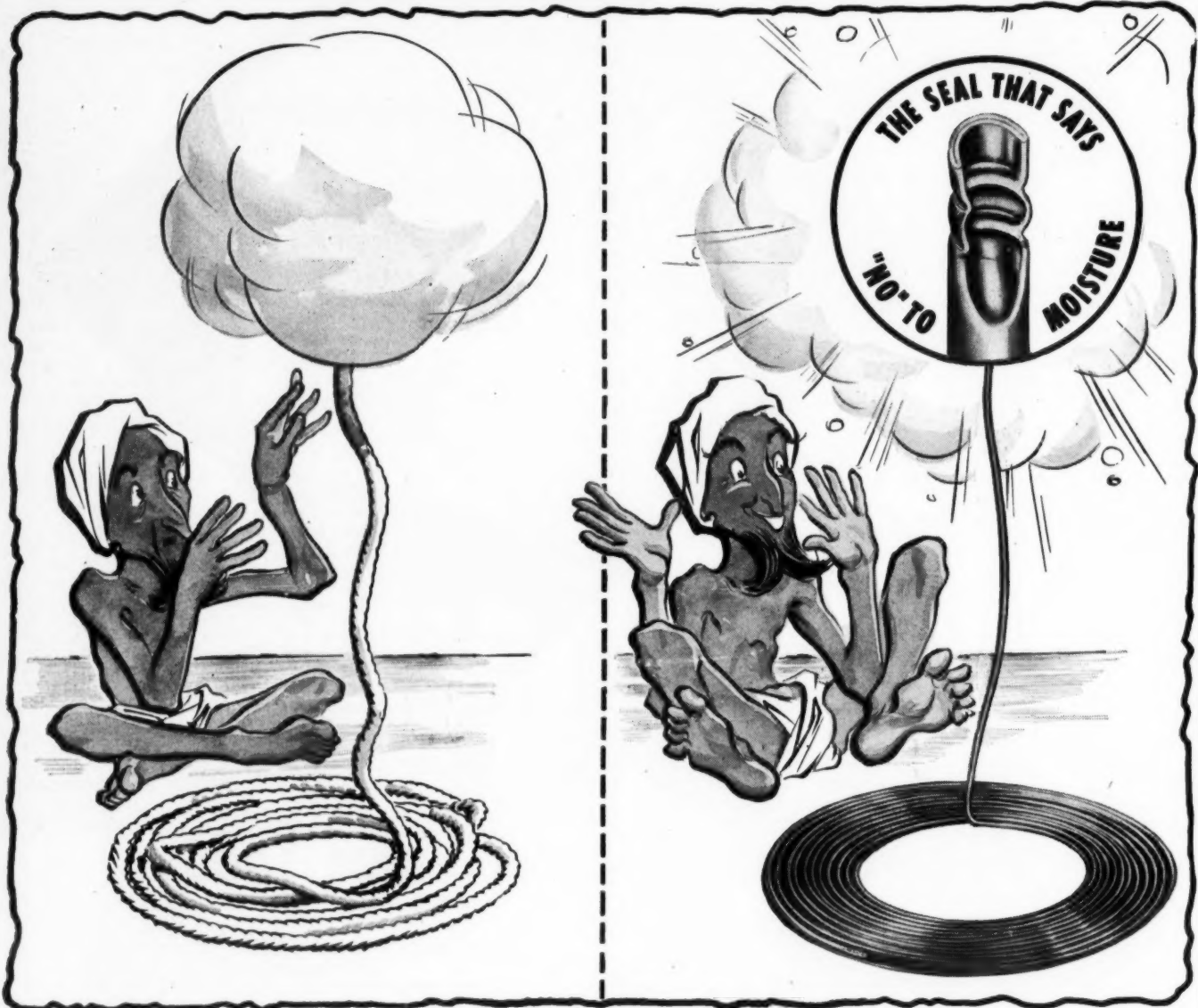
"Will we have an 'Executive Model' home freezer on display?"

"No-o-o-o."

"A trained polar bear, a flock of penguins?"

"No-o-o-o."

"But we will have tools! One of the finest assortments you've ever seen. If there's anything that will stop a crowd of men, it's tools—and more tools. Show us a man who isn't interested in handsome, modern, quality tools and we'll show you a prospective ribbon clerk."



NO TRICK KEEPING DRYSEAL DRY REFRIGERATION TUBE

— WE DOUBLE-CRIMP IT! —

You don't have to worry about moisture when you use Revere Dryseal Refrigeration Tube! A special precise, mechanical double-crimp seal made at each end of the tube when it is manufactured keeps the inside completely bone dry and free from dirt. And because this seal does not change the diameter of the tube it will pass through any opening large enough for the tube itself.

Dryseal is easy to install, too. For it is dead-soft and can be bent with the hands with ease. And when you want to flare it for compression fittings you'll find it can be done without danger of splitting. This is because of the ductility and soft temper of the copper used.

Dryseal is now made to new, more economical dimensional standards, with tube sizes from $\frac{1}{8}$ to $\frac{3}{4}$ O.D.

It comes neatly packed; two 50-foot coils to the carton. Carton is attractively designed so that it is easy to identify in stock. All of which makes for easier, faster, trouble-free, quality installation.

Ask your distributor about Dryseal next time you order refrigeration tube. He has Dryseal and will give you prompt delivery.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Avenue, New York 17, New York

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y.
Sales Offices in Principal Cities, Distributors Everywhere.

If You're Interested in Refrigeration You'll want a copy of the new

DEPENDABOOK No. 150

Refrigeration
Parts Catalog

DEPENDABOOK Number 150 is jammed full of illustrated refrigeration parts and supplies at rock-bottom prices... Depend on the DEPENDABOOK. Write for your copy.

"Service doesn't falter when it comes from Harry Alter"

The HARRY ALTER CO.

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134 LAFAYETTE ST., NEW YORK 13, N. Y.

WHOLESALE ONLY

Industry Show Preview

Plastic Domes Afford Peek Into Tecumseh Unit Insides

Emphasis in the Tecumseh Products Co. booth will be centered on the firm's new compact compressor. A plastic domed model of this unit will be set up operating at full motor speed.

Larger sized hermetics, particularly the new $\frac{1}{2}$ and $\frac{3}{4}$ -hp. units, will share the spotlight with the compact compressor.

Another plastic domed model, operating in slow motion, will show the inner workings of an internally mounted $\frac{1}{8}$ -hp. single cylinder hermetic. Cutaway models of all types of conventional and hermetic compressors and representative compressors and high sides of the entire line will be scattered about the booth.

Visitors will also get a chance to look over the firm's regular line of internally mounted $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$ -hp. hermetics. The latter two are "Freon-22" units. Visitors will also see the externally mounted $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$ -hp. twin cylinder units. The first two are "F-12" units, the $\frac{1}{2}$ -hp. either "F-12" or "F-22," and the $\frac{3}{4}$ -hp. an "F-22" unit.

What Does a Floc Test Mean? Sun Oil To Tell

What's the significance of the floc test? Stop off at Sun Oil Co.'s space where the line of Suniso refrigeration oils will be on display and you'll find out.

Company personnel will show you by means of laboratory equipment for the determination of low-temperature waxing characteristics of oil-refrigerant mixtures. The equipment will also be used to demonstrate the "superior characteristics" of Suniso "G" oils.

Among Sun men at the show will be M. A. Markley, general manager of the industrial products department; Dr. E. S. Ross, chief of the refrigeration oils section of the same department; W. G. Beattie, Detroit division manager; Walter J. Coppock, research engineer; and Laurens H. Fritz, assistant advertising manager for industrial products.

Marsh Will Show New Valve Line and Gauges

Taking advantage of its first opportunity to exhibit the regulators, solenoid stop valves, and other refrigeration valves made by its newly acquired Electricmatic Valve division, the Jas. P. Marsh Corp. has contracted for a 40-ft. space at the show.

Its complete refrigeration line including Marsh gauges and dial thermometers, will be spread out over booths 249, 251, 253, and 255.

James Emmett, Jr., Marsh sales manager, will head the company delegation which will include, Robert Barnett, Harry Kirby, Frank Ziccarelli, Charles Kelly, and the S. C. Kauffmans, senior and junior.

Eston Will Offer Useful Cylinder Miniatures

Miniature and useful replicas of the firm's cylinders for refrigerants and aerosols can be seen at the Eston Chemicals booth which will feature a display of "Freon," methyl chloride, and sulphur dioxide as well as household insecticides, deodorants, and plastic paint sprays.

Eston manufactures five sizes of cylinders for methyl chloride and sulphur dioxide plus an equal number for "Freon-11," "Freon-12," "Freon-22," and "Freon-114."

Representing the company at the Atlantic City show will be A. M. Esberg, president; W. E. Horn, sales manager; George W. Wilson, Chicago area representative; and George L. Hickey, Jr., New York area representative.

Complete Control Line Display Readied by Ranco

Too conservative to do anything sensational or promote a "mystery" plan, Ranco Inc. will content itself with just showing its complete line of household refrigerator control replacements and commercial refrigeration controls, according to G. E. Graff, sales manager.

"We just plug along in our old fashioned way with the main thought in mind of service to our customers in particular and to the industry."

Visitor To 'Get Into Act' At Virginia's Exhibit

Virginia Smelting Co. has decided not only to give visitors demonstrations of its products but to let them "get into the act"—if they want to.

"Our visitors will actually see how Presstite Tape stops dripping of cold pipes," the company revealed.

"The uses of Permagum as a sealing compound to prevent the entrance of moisture to insulated areas will be illustrated, and the visitors to our booth will be given an opportunity to actually mix and apply Enamelite, a two-component mastic for applying soundproofing and insulating material to ductwork and to walls of refrigerating rooms."

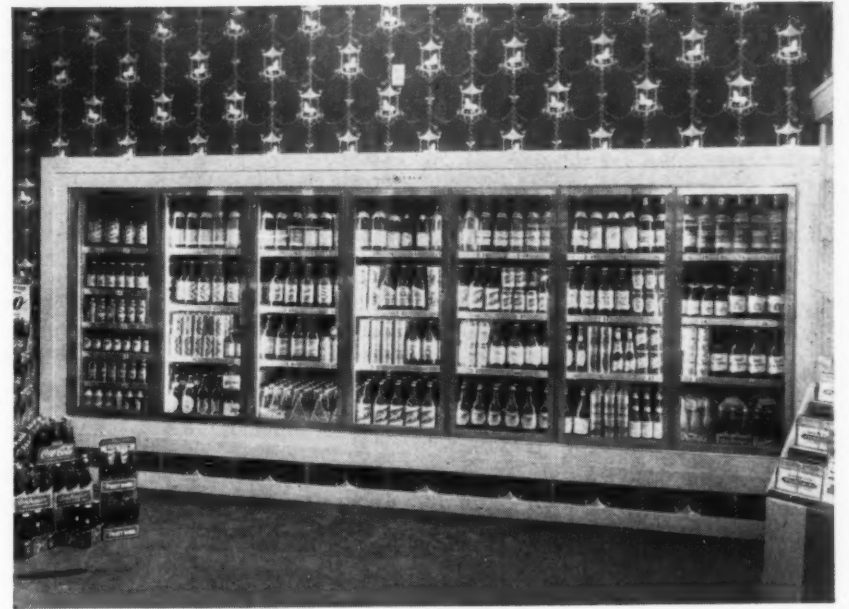
Gem Will Erect Florist Cabinet In Its Booth

Gem Refrigerator Co., which is now in the process of building a new one-story plant in Philadelphia, will erect its latest florist display refrigerator—model FS-8—in booth 247.

Features of the sectional-constructed refrigerator are the large amount of glass ("Twindow") display area, its exterior polished stainless steel lining and trim, and its black porcelain enamel interior. The interior is also fitted with removable display steps and adjustable display shelf, together with fluorescent lighting.

A gravity fin coil and drain baffle are furnished with the refrigerator. In addition, FS models have sliding doors which operate on special roller-bearing rollers.

Super-Cold Makes Wall Cabinet a 'Picture Setting'



This wall refrigerator, made by Super-Cold Corp., is installed in the Peter Pan Supermarket in Los Angeles. In a story in the Sept. 19 issue of the News it was erroneously credited to another maker of commercial refrigerators. Sunk in the wall, the refrigerator has seven glass doors, and is framed on all four sides with a flat-white "picture frame." It will hold more than 500 cases of beer, mixers, and soft drinks.

Variety of Products In Display Planned by Tenney

Its "positive control" thermostatic expansion valve and an entirely new line of "Drum" ceiling units, plus a revised and new line of unit coolers, will be on display at the Tenney Engineering Co. booth at the All-Industry Exposition.

Lined up for trade inspection will

be the "Mighty Midget" unit cooler, the Tenney Defrostolator, a streamlined line of ice cube makers and household evaporators, and gravity coils as manufactured for original equipment manufacturers.

Available to answer technical questions will be Monroe Seligman, president; Cleve A. Sewell, vice president; Thomas Warren, Sidney Shapiro, Robert H. Brown, and Saul S. Schiffman.

ANSUL OIL

THE ALL-TEMPERATURE REFRIGERATION OIL

Recommended for air conditioning and refrigeration systems using standard refrigerants.

ANSUL OIL is an ALL-Temperature Refrigeration Oil which conforms to the rigid wax-free specifications established by Research. It will not separate wax when mixed with a refrigerant (under specified conditions) and subjected to temperatures as low as SEVENTY DEGREES BELOW ZERO (Fahrenheit).

ANSUL OIL has been machine tested for lubrication and wax-free characteristics in both high and low temperature installations. It is absolutely uniform... maintains high stability and has a low oxidation rate. It has proved suitable for ALL refrigerating systems using any of the standard refrigerants.

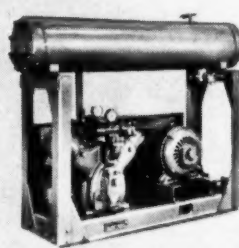
Ansul Research was first to recognize the problems resulting from low-temperature wax separation in oil-refrigerant mixtures. It realized the critical need for an oil which would not only lubricate and protect moving parts but would also eliminate the persistent troubles which were traced to wax-separation from oil-refrigerant mixtures.



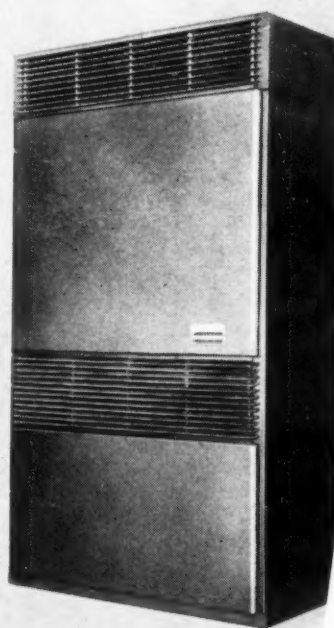
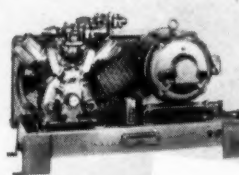
ANSUL TESTED FOR
✓ LOW MOISTURE
✓ LOW WAX
✓ HIGH STABILITY

ANSUL 150 OIL—The All-Temperature Refrigeration Oil—Is sold by leading refrigeration wholesalers everywhere. (If you require a higher viscosity oil ask for ANSUL 300.)

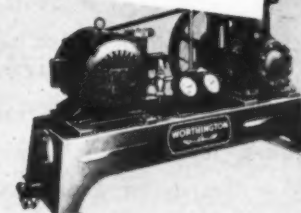
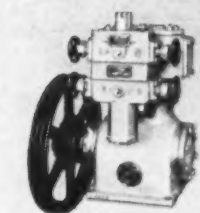
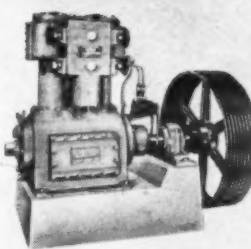
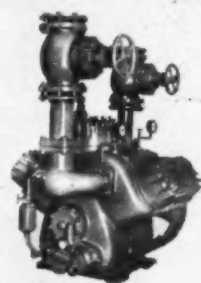
ANSUL CHEMICAL COMPANY
REFRIGERATION DIVISION, MARINETTE, WISCONSIN
ANSUL SULFUR DIOXIDE, ANSUL METHYL CHLORIDE, ANSUL OIL, KINETIC'S "FREON'S"



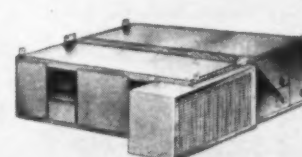
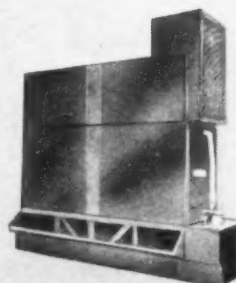
A complete line of Freon "12" Refrigeration Machines—2 to 125 tons



A complete line of Package Air Conditioners—3 to 15 tons



A complete line of Ammonia Compressors—1 to 100 tons; also Ammonia Boosters



A complete line of Air Units, Evaporative Condensers, Evaporative Coolers, Unit Heaters, Wet and Dry Product Coolers for both Freon "12" and Ammonia. Also water coolers, valves, fittings and pumps.

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MORE COMFORT—LESS COMPLAINTS
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WORTHINGTON

A BALANCED LINE... A BALANCED FRANCHISE

Mfrs. To Make 'First Showing' of New Products Against Colorful Backgrounds

Welding, Cutting Tools Get Live Demonstration

A live demonstration of oxy-acetylene welding and cutting equipment for the air conditioning and refrigeration industry and the techniques for operating it will be staged at the Linde Air Products Co. booth at the All-Industry Exposition.

This equipment will include both the Purox and Prest-O-Weld welding and cutting apparatus and the Prest-O-Lite air-acetylene equipment for soldering and brazing. Both oxygen and acetylene will be provided from the new small-size Q and WQ cylinders.

A Halide leak detector will be exhibited. A large panel has been prepared showing many types of welded pipe fittings and joints frequently used in the trade. Among these are bull plugs, reducers, elbows, tees, and branches.

'Explosion-Proof' Water Cooler Readied by Oasis

The new Oasis explosion-proof cooler, Model OP-5SX, which has never been placed on public exhibition before, and the new Oasis bubbler compartment cooler, Model OP-3R, will command attention at the Ebco Mfg. Co. booths at the All-Industry Exposition. In addition, Ebco will also have on display at booths 642 and 741 representative

coolers from its complete line of 16 models. These include Models OP-10, OP-10WH, OP-20, and the three new static models; Models OP-5S, OB-RS, and OB-2S.

In booth 544, Ebco will display its new Oasis air drier which was announced in August. There will be an operating model with a plexi-glass cover so that interested visitors can examine this completely new product.

On hand to answer questions and to greet all old friends will be A. R. Benua, president, and Louis P. Benua, vice president, with other executive members of the sales and manufacturing staffs. Ronald Gray, Jacksonville, Fla.; Joseph Siegert, Philadelphia; S. M. Davison, Chicago; and Ray Graham, Springfield, Mass., all Ebco district sales managers, will be in the Ebco booths.

Alter Co. Has 'Haven' For Weary Visitors

If you get tired out tramping around the various exhibits at the All-Industry Show, there's a nice place where you can go for a rest. But not where you think.

At Booths K and L the Harry Alter Co. will furnish a "Rest Haven" complete with comfortable chairs where weary exposition visitors can relax and take a "breather." Everyone's invited to drop by. The Alter company emphasizes that there will be no displays of merchandise at the company booths.

Looking Over Airserco's New Analyzer



Visitors at the Illinois State RSES convention in Rockford were treated to an advance showing of some new products, including the Airserco dual range analyzer (110-220 volts) and volt-ammeter assembly being shown here by George Wilson, manufacturers' representative to Indianapolis Servicemen E. B. Allen (extreme left) and W. E. Wulf (extreme right), and Paul Reed, RSES educational director.

3 New Items Herald Fine Products Entry In Show

Coming into the All-Industry Exposition for the first time, the Fine Products Co. has indicated that it will have three new items on exhibit and will offer demonstrations from cutaway models on the operation of its complete line of equipment.

On display in booth 101 will be Rapid refillable dehydrators, dehydrator indicators, refrigerant cylin-

ders, Reach All pick up tools, refrigerant charging hose and Duz All carbonic gas service cylinders.

Emphasis will be placed on the refillable dehydrators, which the company explained, have shells that will withstand 6,000 lbs. p.s.i. pressure. The dehydrators also permit cleaning of the inlet and outlet screens and the internal shell without danger of puncturing screens. A reinforcing coil spring prevents the outlet screens from collapsing.

The dehydrators range through eight sizes from 5 cu. in. to 200 cu. in. All will be present for inspection at the show.

Refrigerant cylinders will be displayed in 5, 10, 25, and 35-lb., SO₂ capacity, sizes. Refrigerant charging hose will be on view in three different sizes.

Examination of the carbonic gas service cylinders, which can be used for a variety of purposes such as pressure testing refrigerant lines, blowing out lines and condensers, etc. is invited by the manufacturer.

White-Rodgers Controls Have Velvet Background

Arrayed on backgrounds of colorful velvet, the complete line of White-Rodgers temperature and pressure controls for refrigeration and air conditioning will be offered for appraisal at booths 735-37-39 at the All-Industry Exposition.

Special panels will draw attention to thermostats, pressure controls, temperature controls, and defrost controls while a central display will point up the features of the entire line.

Representing the White-Rodgers Electric Co. at the Exposition will be J. A. Rodgers, president; Jack Searls, vice president in charge of sales; E. C. Robinson, advertising manager; Arnold Petersen, northeastern divisional manager; E. E. Harwood, Pittsburgh district manager; H. F. Killinger, Philadelphia district manager; Frank Tanler, Buffalo district manager; Russ Sherer, Chicago district manager; Gordon Curran and Jack Weigert of the New York office; A. L. Keane, Atlanta district manager; and Steve Luther, engineer.

Delavan Co. To Display Expanded Line of Parts

Delavan Mfg. Co. in Booth 860, will show visitors a greatly-expanded line of replacement parts for Frigidaire and Kelvinator, plus a complete line of parts for Crosley, Coldspot, and other refrigerator makes.

The company will also distribute its new 1950 catalog, which is freely illustrated for fast parts identification.

Westinghouse 'Plays It Cagey' on Booth Exhibit

Westinghouse is "playing it cagey" this year. H. F. Hildreth, manager of the refrigeration specialties department, smiles broadly as he delivers an invitation to one and all to stop around at booth Nos. 508-10 and 12 at the All-Industry Show.

Hildreth vaguely hints that developments carried on in the Westinghouse laboratories during the past two years have resulted in something that will be "sensational" in the refrigeration field. And it'll be shown for the first time to the trade at the All-Industry Air Conditioning & Refrigeration Show.

In addition, Westinghouse will show a complete line of self-contained water coolers and representative models of their commercial milk cooler line.

Sections Can Be Added To Carrier for Cylinders

"The handiest carrier for awkward steel cylinders ever invented" is the way Wabash Mfg. Co. describes its "E-Z-Tote" add-on type carrier which it is introducing at the All-Industry Show.

Wabash expects that servicemen will be particularly interested in seeing the carrier, made in two sizes to fit most popular makes of refrigerant cylinders. The carrier is formed of heavy steel wire with welded joints and is secured to a cylinder by a heavy stove bolt.

Wabash will also have something else new to show servicemen—its "Pacific Coast" all brass, silver soldered, silica gel drier. The outlet filter consists of two brass screens designed to provide maximum filtration with minimum pressure drop, the company stated. The drier is furnished complete with threaded seal caps.

Beyond these two new items, Wabash plans to exhibit its complete line of parts, showing the construction of practically everything it makes.

Unveiling of Ice Cuber Planned by Loudon, Inc.

Loudon Sales, Inc. has announced that it expects to unveil its new automatic ice cube maker at the All-Industry Exposition.

The company will use booths 207-209 to draw attention to the unit which is claimed will make 4,000 round cubes every 24 hours at an operating cost of approximately 20 cents.

According to Loudon, the freezer will make 300 cubes every freezing period, which is an hour and 45 minutes. The tank is stainless steel in and out and the storage bin is stainless steel and insulated with cork. A 1/4-hp. low temperature compressor is used. The storage hopper will hold 100 lbs. of ice.

Two models are available. One can be connected direct to the water line and drain. It sells for a distributor's net cost of \$400, F.O.B. Minneapolis.

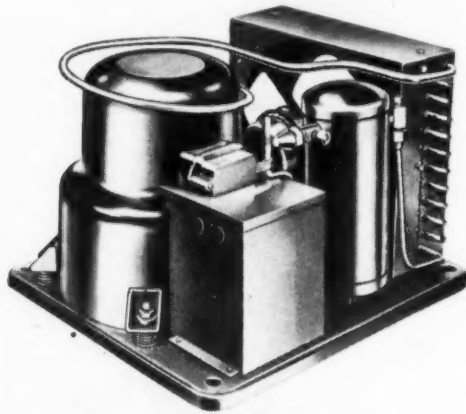
The other has a storage tank and sells for a distributor's net cost of \$475. Dimensions are 21 in. wide, 40 in. long (including storage bin) and 39 in. high.



Kelvinator Open Type Condensing Units (1/4 H.P. to 1 H.P.)



Kelvinator Water Coolers (Pressure and Bubbler Types)

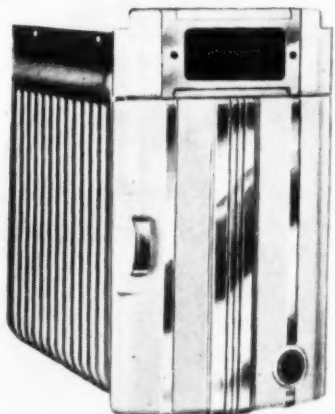


Kelvinator Sealed Type Condensing Units (1/4 H.P. to 1/2 H.P.)

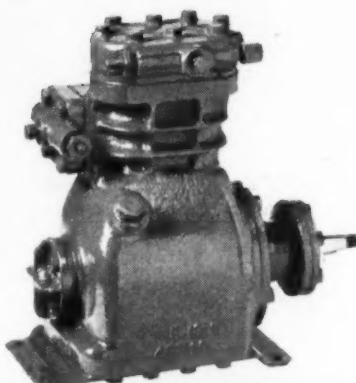
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RIGHT! Refrigeration men with an eye to the future choose Kelvinator. It's the name that always sells, always satisfies. Today, build a sound basis for business tomorrow. See these top-quality products at your nearest Kelvinator depot. All types and sizes are available for immediate shipment. Write, phone, or drop in for quick service or helpful information. Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.



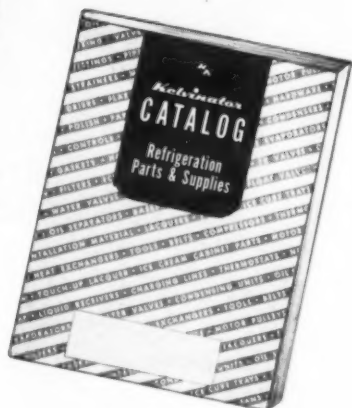
Kelvinator Stainless Steel Evaporators



Kelvinator Compressors (1/6 H.P. to 5 H.P.)



Kelvinator Silica Gel Driers



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MANUFACTURERS
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What's the Best Method for Seeing the Show? 3 Veterans Tell Their Secrets

Service-Contractor

'Talking with Factory Officials Is Big Help'

"How to see an All-Industry Show?"

"Well, what I've seen is that a lot of fellows go gallivanting all night and then can't get up in time for those 9 o'clock speakers.

"What I generally do is go to bed at a reasonable hour so I can get up early to see and hear what's going on," says John T. Heger, independent Chicago serviceman who specializes in low-temperature work and is seriously interested in RSES activities.

"Most of the fellows go to conventions to learn something, but it's not going to help if you're up all night. And then there's 'politicking' which is just a waste of time as far as I'm concerned.

"The exhibits at the All-Industry Show are interesting and we try not to miss a single one. At the last show in Cleveland we started at one end and caught every booth. We'd remember where we stopped one day and start from there on the next day.

"Educational exhibits are the most interesting, I'd say, and the ones with working cutaway models are best. You can see how they work. If the exhibitors are just showing the same things as they have on display at the wholesaler's, there's no point in visiting the exhibits," Heger contends.

The opportunity to talk with factory executives and engineers at the exhibits, however, regardless of what's on display, is a great advantage offered by the All-Industry Show, Heger indicates.

"Take myself, for instance, I've been using the Hotshot line of valves for 14 years. Then suppose I get two or three that won't work. In talking to the engineers at the booth I can usually learn that I've made a mistake in application, and that the trouble isn't in the valve. And this applies to all products, not just valves.

"You can always learn at these shows. When you think you know everything, then maybe you'd better quit.

"Talking to factory experts is very valuable, and talking to servicemen from other parts of the country is very interesting, too. There's a change going on in our business now. We're running into competition. It helps to learn about conditions in other parts of the country."

In three accompanying articles a manufacturer, a supplies wholesaler, and a service contractor give their views on the best way to see the All-Industry Show.

Manufacturer

'Grand Tour, Systematic Check Covers Everything'

COLUMBUS, Ohio—There are three principal "approaches" to seeing the All-Industry Exposition in such a way as to get the most benefit out of it, says G. E. "Ed" Graff, sales manager for Ranco Inc., controls manufacturer.

Since he has seen all of the All-Industry Shows, as well as many other trade shows, Ed Graff can qualify as something of an "expert."

Here are the three ways to see the Show:

(1) When the visitor first gets to the Show, he should make the "Grand Tour," walking through all of the aisles, and seeing all of the exhibits. On this trip the Show visitor should take notes of the exhibits on which he wishes to look over in leisurely fashion. The notes should be quickly taken, but should provide the kind of information that can be readily checked later.

After getting back to his hotel or some resting spot after this first trip, the visitor checks his notes, and maps out a plan for seeing again those exhibits in which he is particularly interested.

(This plan, incidentally, is Ed's preferred one.)

(2) Second method. From your trade paper, or some other source, obtain a list of exhibitors at the Show, and any information available on what they plan to exhibit. List or check on the floor plan the ones you're interested in. See those on this list first. But be sure to give yourself time for an over-all look at the Show, so that you won't miss anything.

(3) Third method. Some veteran trade shows goers like to enter the Exhibition Hall, go right through to the back or one side, and then work back towards the entrance. Psychology of this, apparently, is that you'll get a better idea of how your "time" is running on seeing the Show, and also won't miss anything in the "far reaches" of the Exhibition Hall. But it's a rather hit-and-miss method, and the visitor's time may run out on him if he lingers too long along the way.

Supplies Wholesaler

'Pre-Show Itinerary Will Save Valuable Time'

"Get as much information as you can about the Show beforehand and then make a list of things to see and do before you register at the Show," advises Jim Downes of Refrigeration Supplies, Cleveland wholesaler of refrigeration parts and supplies, who has been to all of the Industry Shows.

"Make a list of the exhibits and people you want to see—and check them off as you get them done. It will save you a lot of time and effort."

Downes expressed the hope that exhibitors will give special attention to scheduling and arranging interviews with show visitors who want some private words with company executives in attendance.

He was especially impressed, he said, with the Lehigh and Par exhibits at previous Shows, because of a system for interviews by appointments which they set up and maintained rather rigidly.

Another point brought up was the desirability of bringing something to the exhibit hall in which to carry off the large number of pieces of literature, souvenir gadgets, and other items made available at the booths.

Low-Temp Cabinet Helps Firestone Develop Tire That Bounces at -75°

AKRON, Ohio—Firestone Tire & Rubber Co. recently announced the discovery of a synthetic rubber polymer that will bounce instead of shatter at -75° F.

Firestone research technicians proved the amazing resiliency of the new rubber for Arctic use in a low-temperature cabinet capable of maintaining temperatures below -75° F.

The cabinet was built in the shop of Dan H. Willis Co., refrigeration and air conditioning contractor here. The evaporator consists of copper tubing welded to flat plates, according to Dan H. Willis. He said a 7½-hp., double-end motor drives two standard Carrier compressors, a nominal 3-hp. and a 5-hp., two staged.

Raymond C. Firestone, vice president in charge of research and development for Firestone, believes the new rubber's resiliency "may enable engineers to solve innumerable problems in the operation of machinery, motor vehicles, and aircraft at sub-zero Arctic temperatures."

Rubber tires, hose, gaskets, and belting in the past have frozen as hard as rock at temperatures below -60° F., the company pointed out.

"In comparisons with GR-S and natural rubber, the new Arctic polymer has shown two outstanding advantages in tires tested under extreme sub-zero laboratory conditions," it was claimed. "Tires don't stiffen so much that they develop permanent flat spots when parked and treads don't harden and chip out."

"During Far North military ma-



Technician checks tire resiliency.

neuvres in 1946, vehicles frequently were immobilized because the flattened part of the tire on the ground would take a permanent set when parked overnight. In the morning such tires wouldn't roll until they were thawed out and made round again.

"At temperatures of -61 to -63°, GR-S and natural tread rubbers become brittle, allowing pieces to chip out. Arctic polymer rubber treads in tests at temperatures below -75° retain their resiliency and do not chip or break away."

Members of Firestone's research staff for the past two years have been conducting tests on various types of Arctic rubbers under contract for the U. S. Army's Ordnance Department.

3 tips from the "Little Lady"

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This advertising publicizes Fiberglas as the finest in appliance insulation—giving you an extra value feature to sell and making your selling job easier.

Cash in on these national ads and the mounting consumer acceptance created! Play up Fiberglas Insulation as a feature in your own local advertising and displays—for in today's highly competitive market, Fiberglas is a swell feature to have, a swell feature to sell.

Use copies of these ads in your sales training program. Full color reprints are available FREE. WRITE TODAY to Owens-Corning Fiberglas Corp. Dept. 848, Toledo 1, Ohio.

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ON THE SPOT

by C. Dale Mericle

Open Cases, Solenoids, Safety Pose Problems For Servicemen at Illinois 'Bull Session'

ROCKFORD, Ill.—A lot of interesting things came up when the Illinois Association of the Refrigeration Service Engineers Society got together for the traditional "bull session" that preceded the twelfth annual convention held at the Faust hotel here recently.

Archie Falt, for example, that enterprising individualist who has become well known in the refrigeration industry for the wide variety and high quality of refrigeration jobs he installs in the small town of Lincoln, Ill., was passing around a copy of a chain letter he received a few days ago.

"This one," says Archie, "may be the chain letter to end all chain letters."

(All married men please note.)

"Dear Sir:

"This chain was started in the hope of bringing happiness to all tired businessmen. Unlike most chains, this one does not require any money.

"Simply send a copy of this letter to five married male friends. Then bundle up your wife and send her to the fellow on the top of the list. You will receive 15,188 women, and

some of them ought to be dandies.

"Have faith. Don't break the chain. One man broke the chain and got his wife back.

"Yours truly,"

'Fanning the Breeze' On Open Type Cases

That letter, though, was not really typical of the problems discussed by the Illinois service engineers and contractors during the bull session.

Loren Taylor of Carbondale brought up the point that "a lot of these open type cases have a lot of trouble if they're not installed in an air conditioned store.

"Fans and uncontrolled circulation of air cause a lot of trouble. And exhaust fans which are usually found at the rear of markets that aren't air conditioned draw in dirt from the street which gets on merchandise. If a man doesn't have his store air conditioned, he shouldn't have more than 11 ft. or 22 ft. of open cases," Taylor declared.

"We have stores with 60 ft. of open cases, and the stores are not

air conditioned. The store manager has to spend a lot of time cleaning up the place as well as moving fans around. We had an open dairy case in one market that we couldn't pull down below 55° until we rearranged the location of the fans."

Inquired Willis Stafford, RSES educational director for Illinois: "What do the manufacturers of fixtures advise in these circumstances?"

"No fans," Taylor replied, "but you can't convince the store managers and owners."

Here R. L. Hendrickson, chairman of the bull session, brought up a pertinent point:

"But doesn't the open case increase sales enough to make this extra work worthwhile?"

"Yes," Taylor agreed. "Sales of frozen foods have gone up as much as 60 or 70% with open cases.

"And here's something else we've found about fixtures. Fluorescent lamps seem to discolor meats. This seems to depend on how close the lamps are located to the meat, and there also seems to be a difference between various makes of lamps," Taylor stated.

"During the war," Taylor continued, "when we often had to put on any machine we could get, we'd sometimes have to use smaller units than we figured were really needed on a job. Spoilage and discoloration of meat occasionally resulted. We blamed this on the fact that the machine was too small. We have since learned that actually this trouble was probably due to fluorescent lamps and not under-sized units."

Improper Sizing Can Cause Trouble With Solenoid Valves

Some points of interest in connection with alleged failures of solenoid valves also received an airing during the bull session.

Taylor reported: "We had trouble recently with a job that wasn't working right. We discovered that the solenoid valve wasn't working properly. We thought the trouble was in the valve itself, so we pulled it off and put in a new one.

"When we got back to the shop we tested the valve we had taken off the system and found it okay. We checked back on the job and it turned out that it was a case of low voltage. There just wasn't enough voltage to make the solenoid operate."

Dan Gott of Detroit Lubricator then commented that "solenoid valves should be chosen very carefully. One man recently selected a solenoid that I thought was the wrong size. He had picked out for a 1/2-ton system a solenoid valve with a 3/32-in. orifice which had a capacity of more than 3 1/2 tons.

"Solenoid valves should be selected on the basis of (1) their capacity, and (2) their maximum lifting pressure," he said.

Major point of this discussion was that a solenoid with too large an orifice for the system is working against too much pressure and so may not function properly. The smaller orifice "will give you more lift" and usually has the necessary capacity.

New Twist In Old Line

An interesting and valuable feature of most RSES conventions is the question-and-answer session, and the one at the Rockford meeting lived up to expectations. But "Dick" Hendrickson, chairman of the event, gave it a new twist.

The usual procedure is to have the service engineers ask questions which are answered by a "board of experts," often with the aid of the audience. At Rockford, Hendrickson passed out cards to the audience on which they wrote the questions, but the questions were to be answered by others in the audience. The question that stumped the most people won a prize for its author, three judges making the decision as to when the question was answered satisfactorily.

Paul Reed, RSES educational director; John W. Hall of Automatic Products, and Jim Kline, an RSES member, served as the judges.

The prize-winning question (eight people took a crack at it, and there was a lot of discussion before the judges were satisfied) was submitted by Ralph Porter of Bloomington, Ill.

"I have a Fedders low side float evaporator and a Westinghouse hermetic unit operating a salad table.

A Look at a Hotel Cooling Plant



Crowded into the machinery room of the Faust hotel in Rockford to inspect the new 150-ton air conditioning plant, RSES members get details from Charles N. Debes (standing on the compressor base at left) of Debes & Associates, Rockford consulting engineers.

The unit is charged at present with methyl chloride. How would you remove the refrigerant charge safely?" Taylor asked.

The main point, which was missed by most of the contestants was that this hermetic, and most other hermetics of this type, have an aluminum rotor. Aluminum and methyl chloride can react violently, often causing a fire and possibly an explosion when exposed to air, as has been pointed out to the industry in recent years by "Doc" Walker of Ansel.

"There is no safe way to remove the charge, really," Paul Reed admitted.

The thing to do, it was agreed, was to purge from the liquid line because "there is much less danger of the

charge bursting into flame than if the system was purged from the suction line."

One would have to be very careful, and it was advised to wear goggles to protect the eyes. Reed also suggested that after pumping the system down the lines should be pinched off.

As for the unit itself, it would probably be well, said several in the audience, to dump it in the lake, just as "Doc" Walker had originally suggested.

It developed in the course of the discussion that Porter had not asked an "academic" question. It seems that just a few days ago another individual, who was either careless or

(Concluded on next page)

Come to Booths 658 & 660

Sixth All-Industry Refrigeration and Air Conditioning Exposition, Atlantic City Auditorium, Nov. 14-18, 1949.

PAGE after PAGE tells this story

Want to save time, trouble, and profit-eating call-backs on your refrigeration control replacements? Then make the Cutler-Hammer refrigeration control catalog your standard guide on replacements. Here you will find "specific-fit" units which are not merely listed but already manufactured by Cutler-Hammer for more than 1,000 individual refrigerator models which the industry has produced since 1925. No "modifying", no fussing, no compromises, when you put in C-H "specific-fit" replacement control units. And you'll also quickly see how the widely-known Cutler-Hammer name

(advertised in The Saturday Evening Post, Time, Newsweek, American Home, Better Homes & Gardens, House & Garden, etc.) builds customer confidence and good will. The C-H refrigeration control catalog, as well as the items you need, are available through your authorized C-H refrigeration wholesaler. Do not forget, this C-H refrigeration control line includes the outstanding general purpose replacement control (9521N9) for use with motors having "built-in" overload protection. CUTLER-HAMMER, Inc., 1362 St. Paul Avenue, Milwaukee 1, Wisconsin.

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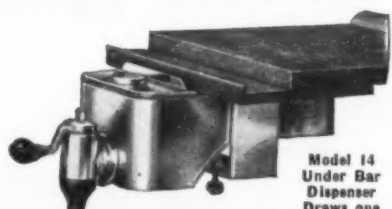
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EXTRA!

JAS. P. MARSH acquires Electrimatic Valve line

The purchase of the Electrimatic Valve Division of Simoniz Co., Chicago, has been announced by Jas. P. Marsh Corporation. Well-known throughout the refrigeration field, the Electrimatic line includes water regulators for control of condenser cooling water, solenoid stop valves, suction throttling valves, and back pressure regulators. All of these products will be manufactured in a full range of sizes in the new Marsh plant at Skokie, Ill.

James Emmett, Jr., Sales Manager of the Marsh Corporation, explained that in keeping with the Marsh policy of reaching out for products that will strengthen the Marsh line, step up manufacturing efficiency, and thus increase refrigeration and air conditioning fields. "The Electrimatic line fits into this scheme perfectly," Mr. Emmett explained. "It is a particularly logical companion for our own line of instruments and valve specialties. Its manufacture involves the same production facilities and methods which have been carefully planned and carried out in our new plant. Above all, it fits our experience. We feel certain that we can make further contributions to the highly respected products."

Electrimatic Control Valves and Regulators by — MARSH

- Condensing Water Regulators
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ON THE SPOT

by C. Dale Mericle

(Concluded from preceding page)
uninformed, had charged this system with methyl and a small leak had developed in the evaporator. Porter had then been called in to do something about the job. When he asked the question he hadn't yet decided what to do.

Other Questions In Contest

Another question—"How could you operate a high side float system with an expansion valve without removing the float? This is an emergency."

And the answer—"Put the expansion valve in the system between the float and the coil and then flood the system to keep the float open, assuming that the float valve isn't stuck in the closed position."

Question—"Would a liquid line sight glass work on a capillary tube system?"

Answer—"If the sight glass was the right size for the liquid line, it would work."

But how useful the sight glass might be in determining whether the system was fully charged was questioned by some in the audience because of the manner in which the capillary functions. The best way to check for proper charge, it was generally agreed, was to watch the frost line.

Question—"Is there any danger in mixing refrigerants in a refrigerator, which might happen when different servicemen were working on the job? This is from the safety angle."

(This one also required several answers before the judges were satisfied.)

Answer—"Yes, there certainly can be danger in mixing refrigerants. Putting methyl in a 'Freon' system

might mean letting the methyl come in contact with aluminum parts. Also, inflammable refrigerants might have been placed in a system and a serviceman who thought the system contained something else would be in danger, say, if he started testing for leaks with a halide torch.

"It's also possible that sulphur dioxide might have been placed in a system, and this might be discharged into the room by the serviceman thinking the system was charged with 'Freon' perhaps. People have been overcome or seriously hurt under such circumstances."

RSES Tours Hotel's New 150-Ton Cooling System

One of the special events that Willis Stafford, educational chairman, arranged for this convention was a tour of the new 150-ton system that has been installed to provide year-round air conditioning for many of the public rooms in the Faust hotel, convention headquarters.

"This will be a 22-zone system when the installation is completed," the group was told by Charles N. Debes of Debes & Associates, Rockford consulting engineers who layed out the job. In conducting the tour Debes explained that eight zones have been completed thus far in the hotel's remodeling program, and these are being supplied by an elaborate system that employs two 75-hp. York machines hooked up in an indirect expansion water-chilling system.

The system is of the double-plenum blow-through type wherein both hot and cold air are supplied to the zones, the mixing of the two to obtain desired room temperatures being regulated within the zones by automatic mixing dampers.

"Over-all control of temperatures in the system is designed for three different types of occupancies—short, medium, and extended," Debes explained.

"The lobbies and stores will have 'short' occupancies, and so in these there will be little temperature differential between the outdoors and indoors to prevent 'shock'."

Electrostatic air filters (American) are employed in the system, which is also believed to have the largest hotel installation of Dorex activated carbon odor removers. These, Debes said, permit the outside air requirements to be cut to as little as 10%.

The system and controls are designed throughout for the eventual possible addition of a third 75-ton unit. As it now stands, the two compressors and two water chillers are interconnected so that any combination of the four units (two chillers, two compressors) may be operated while part of the system is shut down for repairs.

Two water pumps of 300 and 600 g.p.m. capacity, respectively, circulate the water from the chillers to the coils in the fan room. The fan itself a capacity of 60,000 c.f.m. he stated.

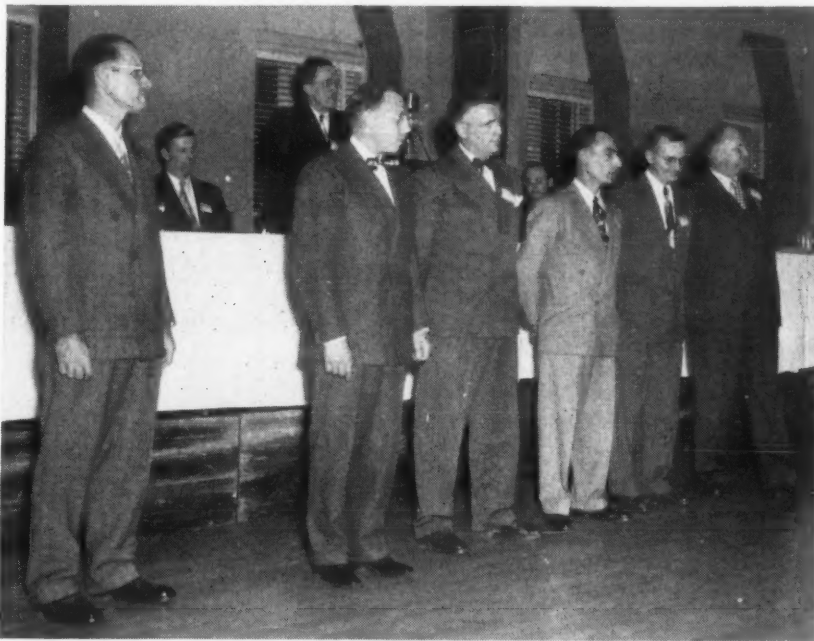
Humidity will be kept below objectionable levels by sub-chilling and then reheating.

There is an elaborate Barber-Coleman control system which includes such things as alarm lights in the machinery room which flash on whenever any zone calls for either 100% hot air or 100% cold air.

"Such a condition would indicate," Debes said, "that either the steam coils were not functioning properly in the one case, or perhaps there was a large and too boisterous crowd gathered in a small public room, in the other case."

"There isn't much that could be done about that latter, except maybe for one of the hotel engineers to set the room 'Microtherm' control down."

New Officers of Illinois State RSES



New officers of the Illinois State RSES sworn in with the assistance of Floyd Lilley, international director (left), included Willis Stafford, educational director; Loren Taylor, sergeant-at-arms; Ward Minors, treasurer; Ralph Porter, second vice president; and Leslie Sturch, president.

Sturch Heads State Officers

Leslie L. Sturch as president heads the new slate of officers for the Illinois State RSES association that was elected during the convention. Other officers include Charles J. Fox, first vice president; Ralph Porter, second vice president; Al Dellheim, secretary; Ward Minors, treasurer, and Loren Taylor, sergeant-at-arms. W. Stafford is educational director.

'Charging' the System

The cocktail party which preceded the annual banquet Saturday night was staged by parts wholesalers in Region 6 of the Refrigeration Equipment Wholesalers Association. Participating firms were Airo Supply Co.; the Harry Alter Co.; Automatic Heating and Cooling Co.; Chase Supply Co.; Fred C. Kramer Co.; Gustave Larson Co.; Refrigeration Supply

Jobbers; Service Parts Co.; Tempco Supply Co.; and United States Electric Co.

Chartered Plane Speeds

Salesman's Calls, Cuts Cost

T. A. "Tony" Fuite, sales representative for Imperial Brass, was telling friends at the Rockford convention how he manages to cover the state of Nebraska in a hurry. This was added to his territory some months ago.

"It's actually cheaper as well as quicker to hire a private plane and pilot," contends Fuite. "I can cover the whole state in three days if I want to rush things, but I usually take about a week. The distances between towns is too great to drive it quickly."

"I get into Omaha about three times a year and there I hire the plane and pilot. The charge is 10 cents a mile, but if I make a contract for the whole week the charge is only 8 cents a mile. And the plane can usually fly direct to the towns, saving considerable mileage as compared with highway travel."

"The only other charge is lodging for the pilot when we stay overnight. He buys his own meals."

"Getting transportation from the airport into town is usually no problem, either, because the people around a private airport are very accommodating," Fuite says.

Besides the speed and convenience provided by this method Fuite has found that it has some sales advantages, he adds.

"The man you call on is really flattered that you flew in to see him."

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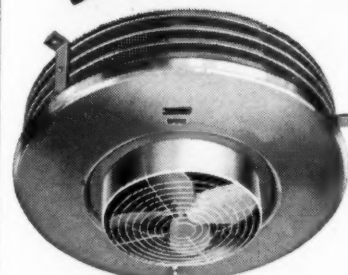
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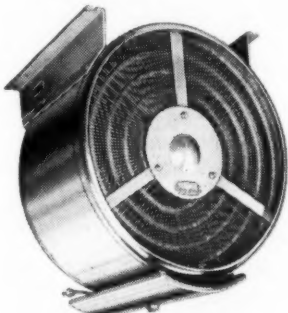
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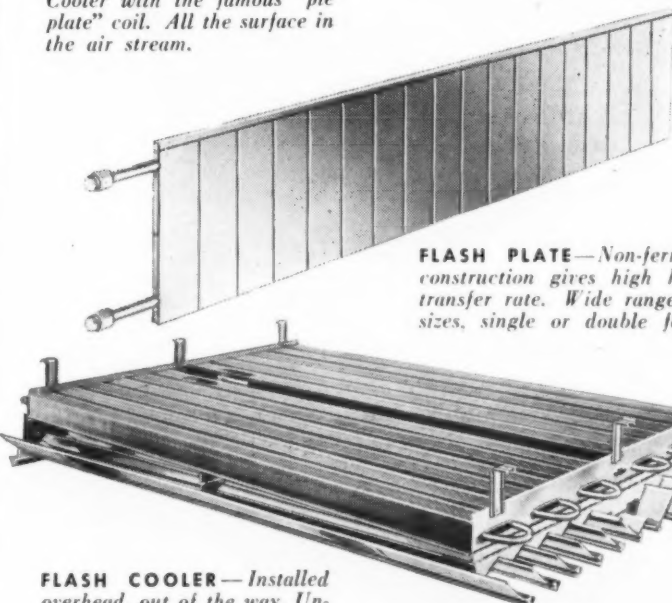
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UNIT COOLER—The Unit Cooler with the famous "pie plate" coil. All the surface in the air stream.

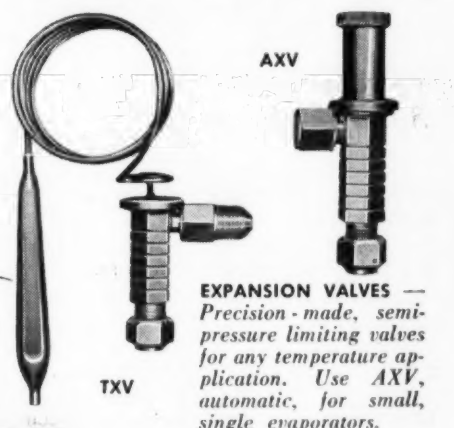


FLASH COOLER—Installed overhead, out of the way. Unrivaled for efficiency in high humidity refrigeration.

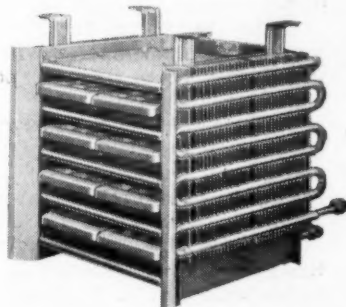
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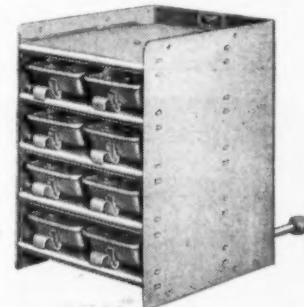
● The dependability of PEERLESS refrigeration equipment gives long life to your installations—pays off in customer satisfaction and increased sales. Every item in the PEERLESS Line, from expansion Valves to Flash Coolers, is expertly engineered from quality materials. You know too that you have the benefit of the latest tried and tested improvements; for PEERLESS always leads the field in new developments which improve performance. Specify PEERLESS for the best in refrigeration equipment.



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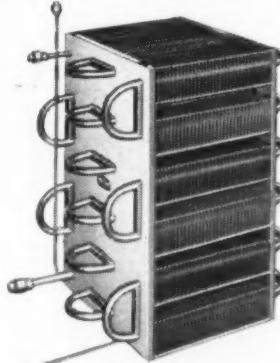
FINNED FASTERFREEZE CUBE MAKER—Combines fin coil surface and cube freezing in a single balanced unit. Many sizes and capacities.



ICE CUBE MAKERS—Snapout—normal—heavy duty models. Top quality, all heavy aluminum, continuous copper tube.



CAPACITY BOOSTER—Another product of superior engineering design. For the correctly designed installation.



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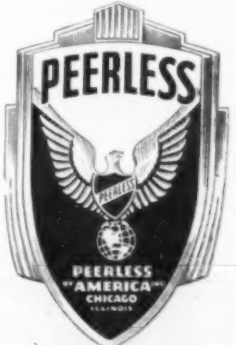
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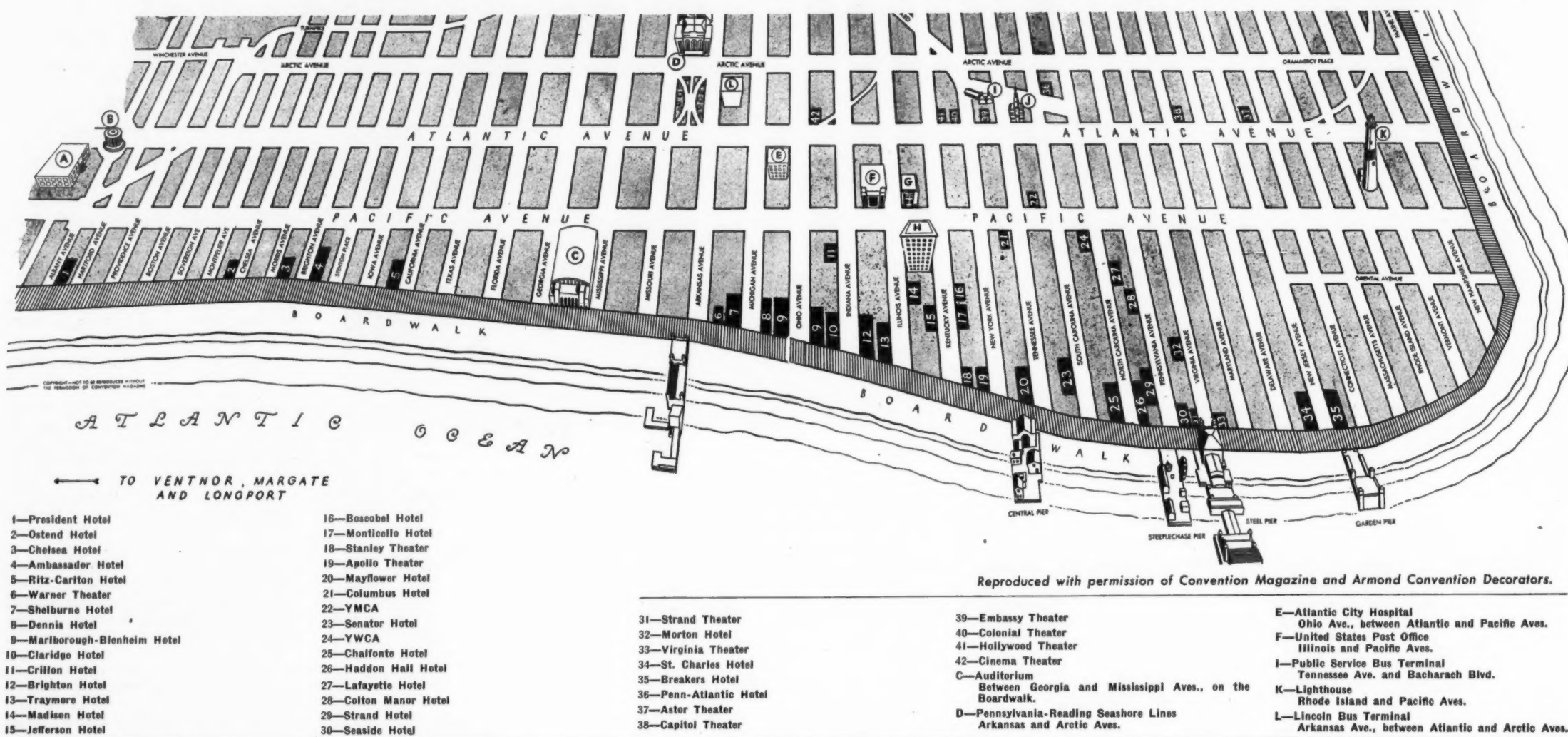
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A Guide Map to Atlantic City, Showing Hotels and Auditorium



All-Industry Preview

Cutler-Hammer To Show 'Specific Fit' Controls

"Specific Fit" replacement controls for more than 1,000 models of refrigerators will feature Cutler-Hammer's exhibit, with actual samples of controls being shown.

Other items will take in semi-commercial and commercial refrigeration controls, motor control for refrigeration and air conditioning applications, safety switches, multi-breakers, and refrigeration accessories.

Cutler-Hammer's booths are 658 and 660. The company will have a hospitality room in the penthouse of the Hotel Brighton.

Those attending the show will include P. S. Jones, vice president in charge of sales; W. R. Reinhold, manager, refrigeration sales; A. R. Johnson, manager, merchandising sales; L. P. Niessen, manager, advertising, business research; W. E. Leffingwell and J. G. Fore, application engineers; and J. P. Simon, Philadelphia district manager.

Also, Sales Engineers W. Stark, Detroit; T. R. Christian, St. Louis; P. L. Erickson, Cincinnati; E. A. Clark, Grand Rapids; H. H. Ratcliff, Minneapolis; and G. W. Greenman, Chicago; C. L. Wymelenberg, adver-

tising department; sales representatives are R. T. Smith, Tecumseh, Mich.; J. A. McLaren, Los Angeles; and G. I. Boone, New York.

Kelvinator To Display New Frozen Food Cabinet

Kelvinator Div. of Nash-Kelvinator Corp. will display about 40 pieces of refrigeration equipment at the 6th All-Industry Refrigeration and Air Conditioning Exposition.

The 600-sq. ft. Kelvinator display area occupies spaces 716-20 and 815-19. Among the larger products exhibited is the new KM-285 frozen food merchandiser, a chest-type cabinet with 8½ cu. ft. of storage space, equipped with an illuminated display board showing full-color views of frozen foods in attractive table arrangements, designed to stimulate point-of-sale buying.

Also on display for the first time is a new portable "cold zone" tester for servicemen, an accurate resistance thermometer in a lightweight carrying case which may be used to check operating temperatures of refrigerating equipment outside of the laboratory.

Other products include plastic cutaway models showing the working interiors of Kelvinator compressors

and water coolers; model BC-180 beverage cooler, 12-cu. ft. freezer; condensing units ranging in capacity from ¼ to 5 hp.; ½ to ¾-hp. refrigerating systems; stainless steel evaporators, complete lines of compressors and water coolers; meters and testers.

McQuay Has Answers to 'What's New' Question

To the "What's New?" question, representatives of McQuay, Inc., will have a ready answer. For the company will be displaying for the first time four new lines of equipment.

New products include a completely-automatic ice maker that produces round ice tips with a daily ice capacity of up to 240 lbs., a radial unit cooler designed for both air conditioning and refrigeration applications, a series of two-way back bar and direct draw bar unit coolers, and a "Lo-Boy Zeropak" speed tunnel freezer.

Taking up only 7½ sq. ft. of floor space, the ice maker is designed to fit under a bar or in other convenient places. Only simple plumbing connections are required to connect the unit to the water supply, according to McQuay.

The ice-making cycle is completed every 30 minutes and is repeated until the storage bin is filled. Thermostatic controls start and stop the

machine to keep the supply constant.

The radial unit cooler is available in seven basic capacity sizes and is designed to allow the maximum head room for low ceiling walk-in coolers. It will be furnished with "long-life" lubricated motors, the company said.

Regarding the bar unit coolers, McQuay pointed out that the coil is "U" shaped in design.

"The air is admitted through the front coil and discharged in two directions out of the side coils for maximum heat transfer efficiency," it was explained. "Available in two basic capacity sizes and only 7 in. and 10 in. high, the units also have long-life lubricated motors."

The speed tunnel freezer is a low-temperature unit especially designed for use in low-ceiling locker plants and related applications where head room is a problem. The unit has a built-in sharp freezer section and is available in four basic capacity sizes.

In addition to the new lines, the wide range of low sides on display will include several styles of air conditioners, unit coolers, and gravity refrigeration coils.

Company representatives will be H. Blake Thomas, Jay R. Resch, and Ralph G. Strutzel, assisted by eastern district sales representatives.

Cutaway Model To Operate At Slow Speed In Frick Booth

Believing that it can give show visitors more information in less time by using a cutaway model operating at reduced speed, the Frick Co., Inc. is planning to set up such a model of its new "Eclipse" compressor in booth 313.

This machine has four cylinders

and the moving parts will be turned over by a special reduction-gear drive, hidden inside the frame of the 40-hp. motor normally used with the compressor.

A mahogany display board will contain pictures of installations of the Eclipse compressor in air conditioning and similar work.

Representatives from the home office will include D. N. Benedict, W. H. Aubrey, Guy E. Elden, C. C. Smith, R. M. Shuford, P. H. Buch, M. W. Garland, M. B. Watts, and Terry Mitchell.

Also on hand will be branch managers Cyril Leech of Philadelphia, J. T. Murphy of New York City, and W. J. Dugas of Washington, D. C.

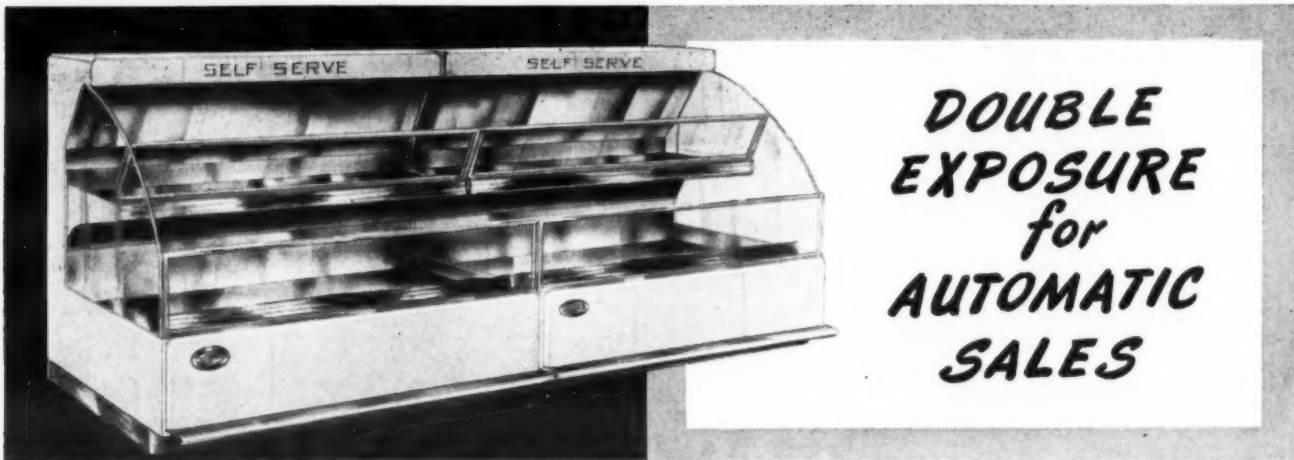
Haverly Electric Highlights Cream Line Milk Cooler

Main attraction in the space of Haverly Electric Co., Inc., will be its new cream line milk cooler. The company is also planning to feature its new all-copper-interior sweet water chilling unit, and a new-type farm freezer in both chest and upright models will complete the exhibit.

The milk cooler has an all-copper interior and the new "smooth wall, floating ice" features.

"The smooth wall interior makes our cooler very easy to clean," the company noted. "Our 'floating ice' feature enables us to do our cooling at the cream line of the milk cooler, which is the most important part of the milk."

According to the company, the chilling unit "has received tremendous acceptance in both the dairy industry and the bakery industry."



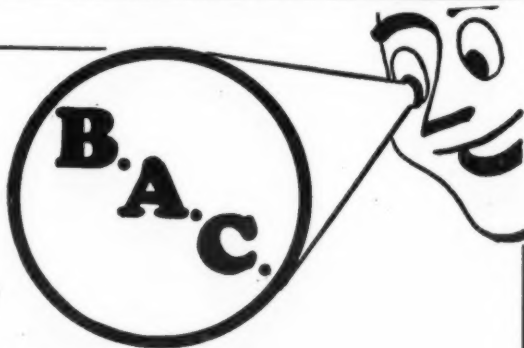
SHERER'S NEW MULTI-DECK CONTINUOUS CASE

The stunning new Sherer Model 2806 open, self-serve, sales-display case exposes more merchandise to shoppers' eyes—and to their reach... and it results in the extra impulse sales which are the big extra-profit makers for food merchants.

You can cash in your food merchant customer's quick response to this money-saving, sales-winning profit maker. See it in Booth 813 at the Atlantic City All-Industry Show November 14-18. Write for complete bulletin and franchise information.



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WHY IT'S...



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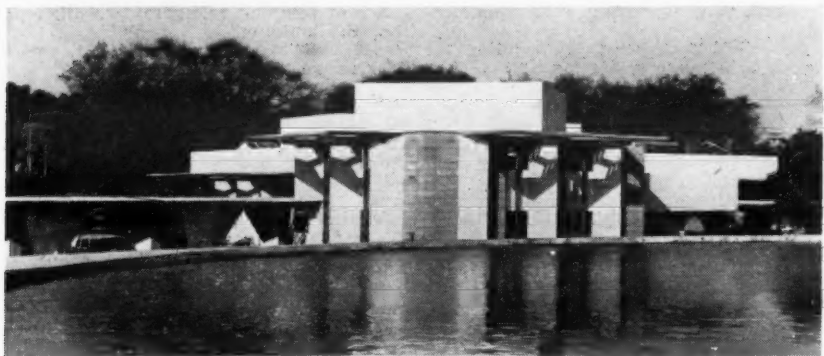
EVAPORATIVE CONDENSERS

Yes, now you can see for yourself why so many consider B.A.C. Evaporative Condensers unequalled in efficiency, construction and economy of installation and operation.

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REMA SHOW

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Concealing, Camouflaging Ductwork In College Buildings Designed By Frank Lloyd Wright Proves Tough Problem for Florida Firm



This photograph of the Benjamin Fine building at Florida Southern college shows the type of Frank Lloyd Wright architecture that Engle Electric Co. had to contend with in installing air conditioning ductwork so that it would not detract from the appearance of the building.

LAKELAND, Fla.—Installing an air conditioning system in buildings not designed to include such equipment can be a bit of a task even when the contractor is granted some leeway.

But when ductwork must be installed so it will not detract from or change the appearance of the buildings—particularly unusual structures designed by the “radical” and meticulous architect Frank Lloyd Wright—the contractor has got himself some real engineering problems.

And that's just the situation Walter E. Engle, owner of Engle Electric Co. here, distributor of Westinghouse air conditioning equipment and retailer of appliances, found himself in when he took on the job of air conditioning two of 14 buildings being constructed at Florida Southern College in Lakeland.

This new group of buildings is noteworthy on several counts: it's Wright's largest project in this country; it's a project rated as one of three very outstanding points of interest in Florida, attracting thousands of tourists; and it's said to mark the first major change in the architecture of college buildings in many years.

The ultra-modern edifices are made entirely of concrete and steel for permanency. Each one is a sort of building-within-a-building, with sub-tropical plants from all over the world used in landscaping.

Because they were designed to emphasize lightness and airiness, Architect Wright did not think the buildings needed to be air conditioned. However, after two of the structures were finished, Dr. Ludd M. Spivey, president of the college, decided that air conditioning was absolutely necessary. The high relative humidities registered in this area were a major factor.

So early this summer, Engle Electric installed one-ton packaged air conditioners in three seminar buildings incorporating classrooms and instructors' offices.

Then came the job of putting central systems in two administrative buildings. A 15-ton unit was to go into the Emile E. Watson building and a 10-ton unit in the Benjamin Fine building.

What made it tough was that both buildings were under construction when it was decided to air condition them. As if that wasn't enough, Wright would not consent to the installation of the systems if ducts detracted in any way from the buildings' appearance.

So Engle went to work on concealing and camouflaging ductwork. He solved the cold-air problem by using the main supporting columns of the building as ducts. His answer to the return-air problem was to put these ducts under floors behind built-in flower boxes and built-in seats. Thus, only the grilles were not concealed.

Engle worked with Kenneth Lockhart, engineer in charge for Wright, in figuring out how to install equipment without tearing the buildings apart.

In addition to the air conditioning equipment, Engle Electric also installed heating equipment, electric wiring, and lighting in the five buildings. The three seminar buildings are heated electrically and the other two by oil from a central plant which is tied in with the two refrigeration systems.

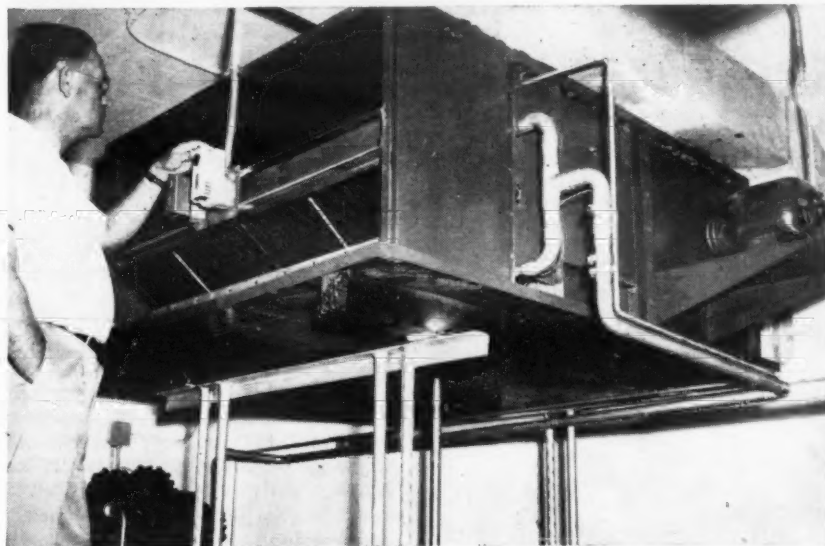
Seven more buildings yet to be constructed will be air conditioned. These include science and industrial arts buildings. Also, plans are under study for a theater and music building.

Jewelry Store System Cools Sales, Watchmaking Depts.

FRESNO, Calif.—A 20-ton York air conditioning system, one of the largest ever installed in a retail jewelry store in the state, is an outstanding feature of the new Edmond's Jewelry store on Fulton St. here.

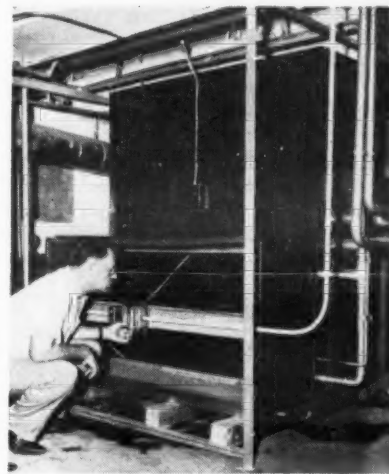
The air conditioning system cools not only the sales floor, but executive offices, basement watchmaking department, and the diamond rooms, where private sales conversations are carried out, according to Al Rosen, head of the store.

Business Manager Checks Business End of Units



ABOVE: Corning Tolle, business manager, pictured at the controls of the 10-ton Westinghouse air conditioning unit in the Benjamin Fine building, Florida Southern college.

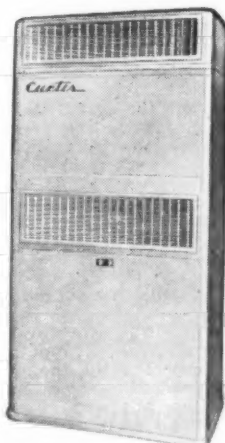
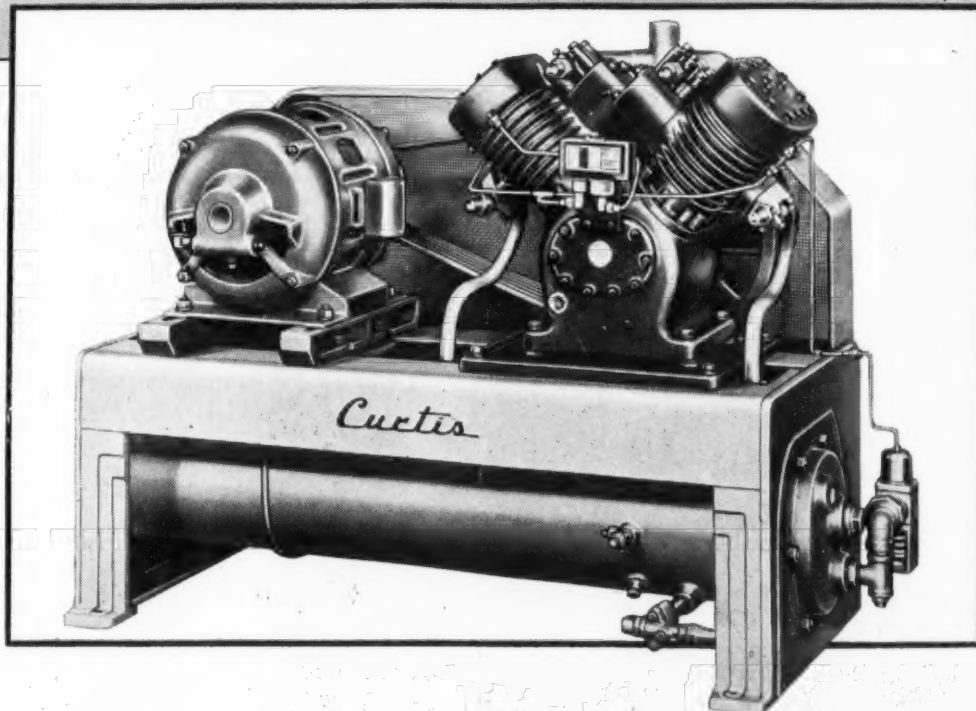
RIGHT: Tolle checks the temperature control setting on the 15-ton unit in the Emile E. Watson building. To left, out of picture, is heating plant which operates through both systems. Two complete refrigeration systems were used to give more positive control, due to high humidities of Florida's semi-tropical climate. Coil area was built up to handle the extra heat load caused by the excess moisture and humidity.



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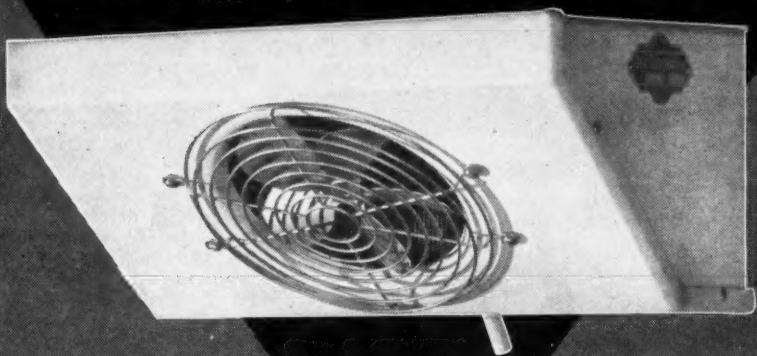
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Cleveland Will Make Effective New Refrigeration Code by First of Year

Situation on Licensing Is Not Clear as Yet

CLEVELAND—Enforcement of the refrigeration code recently adopted by the city of Cleveland is expected to begin in earnest around the first of the year, according to local officials.

With some exceptions and modifications, the ASA B9 Safety Code of Mechanical Refrigeration has been adopted by reference to cover the safety requirements for Cleveland installations of refrigeration and air conditioning.

Administrative requirements of the code call for such things as permits to allow installation of new systems or alterations to existing systems of certain types or sizes.

Although the refrigeration section of the code (Chapter 177) includes a paragraph which states that permits will be issued only to persons or firms registered with the city and furnishing a bond, there is actually no provision in the code licensing section which requires such registration or bonding of refrigeration contractors.

In other words, then, anyone who wishes will be able to obtain a permit for the installation or alteration of a refrigeration system, according to the present wording of the code.

It may be, however, that changes will be made in the licensing section of the code to include refrigeration. Permits are necessary on systems containing Group 2 or 3 refrigerants, or systems containing more than 30 lbs. of a Group 1 refrigerant, as defined in the ASA B9 code.

Within the limits of the above requirements, permits are necessary for "alterations" as well as new installations, but are not required for "repair" of a refrigeration system.

The Cleveland code distinguishes between "alterations" and "repairs" as follows:

"An 'alteration of a refrigerating system' shall be any change involving an extension or addition to the system; a change in refrigerant from a refrigerant of one group classification to a refrigerant of another group classification; a change in the arrangement, type, or purpose of the

original installation; a change in the size of the equipment utilized; relocation or replacement of a compressor, generator, condensing unit, or evaporator; or replacement of equipment, parts, or installation which are not in conformity with this code.

"Repair of a refrigerating system" is a replacement or renewal of any part of an existing system other than a compressor, generator, condensing unit, or evaporator, with like material or part for the purpose of its maintenance, provided that when such replacement or renewal is of a part not in conformity with the provisions of this code, such replacement or renewal shall be deemed to be an 'alteration'."

In adopting the ASA B9 code, Cleveland authorities made 23 changes. Most of these consist of slight revisions in wording or changes to conform with other sections of the general building code for the city.

What might be considered a major change is that provision which allows "unit systems" containing not more than 30 lbs. of a Group 1 refrigerant to be installed in lobbies of residential and commercial occupancies.

ASA B9 prohibits all installations of refrigerating systems in lobbies as well as public stairways, hallways, entrances, or exits of public assembly occupancies, and for residential occupancies limits such installations to unit systems with not more than 4 lbs. of refrigerant.

Full text of the refrigeration code, which is Chapter 177 of Cleveland Building and Housing Code, follows, along with the changes made in the ASA B9 code.

Text of Code

CHAPTER 177. REFRIGERATION

177-1. SCOPE AND APPLICATION OF THIS CHAPTER. The provisions of this chapter shall apply to all mechanical refrigeration systems installed after the effective date of this code and to all parts replaced or added to systems installed prior to effective date of this code.

177-2. OTHER REGULATIONS. The provisions of this chapter are supplementary to and in addition to the applicable

provisions of statutes and rules and regulations promulgated by authority of statute; in cases of conflict, the more restrictive provisions shall govern.

177-3. STANDARD SAFETY CODE.

Except as otherwise provided in this code and except where more restrictive provisions govern, all mechanical refrigeration systems shall be designed, constructed, installed, operated and maintained, and all alterations, relocations, inspections and tests shall be made in conformity with the provisions of the "American Standard Safety Code for Mechanical Refrigeration," ASA B9, as listed, identified and specified, and subject to any modifications included in Chapter 180, "National Standards," of this Code.

177-4. PERMITS.

(a) A permit shall be required for every new installation or alteration of a refrigerating system containing a Group 2 or Group 3 refrigerant. (For classification of refrigerants consult ASA B9.)

(b) A permit shall be required for every new installation or alteration of a refrigerating system containing more than 30 lbs. of a Group 1 refrigerant.

(c) No permit for a refrigerating system containing a Group 3 refrigerant shall be issued and no such system shall be installed except after approval by the Board of Building Standards and Building Appeals given upon submission of acceptable evidence that no public hazard will be created thereby. A refrigerating system containing a Group 3 refrigerant shall be installed in conformity with the provisions of this code and in conformity with the conditions of approval specified by the Board of Building Standards and Building Appeals.

(d) No permit shall be required for repair of a refrigerating system.

(e) Where a permit is not required by this code, such exemption shall apply only to the requirement for a permit and all installations, alterations or repairs, whether made with or without a permit, shall be made in conformity with this code.

(f) Whenever the proposed installation is of such extent that it cannot be adequately described on the application for the permit, the application shall be accompanied by such drawings and descriptive data as are required to verify compliance with the provisions of this code.

177-5. DEFINITIONS.

(a) In application and interpretation of this chapter, the definitions included in ASA B9 shall apply.

(b) The following additional definitions shall also apply:

1. An "alteration of a refrigerating system" shall be any change involving an extension or addition to the system; a change in refrigerant from a refrigerant of one group classification to a refrigerant of another group classification; a change in the arrangement, type or purpose of the original installation; a change in the size of the equipment utilized; relocation or replacement of a compressor, generator, condensing unit or evaporator; or replacement of equipment, parts, or installation which are not in conformity with this code.

2. "Repair of a refrigerating system" is a replacement or renewal of any part of an existing system other than a compressor, generator, condensing unit, or evaporator with like material or part for the purpose of its maintenance, provided that when such replacement or renewal is of a part not in conformity with the provisions of this code such replacement or renewal shall be deemed to be an "alteration."

177-6. INSPECTION AND TESTS.

(a) No refrigerating system for which a permit is required by this code shall be placed in operation until it has been tested by the owner in the presence of the authorized representative of the Commissioner of Building and Housing, inspected by such representative, and approved for operation.

(b) Whenever a refrigerating system is approved for operation, the Commissioner of Building and Housing shall issue a certificate which shall be affixed, under glass, in a location adjacent to the compressor or generator of the refrigerating system.

177-7. MAINTENANCE AND PERIODIC INSPECTIONS.

(a) All refrigerating systems shall be maintained in a safe operating condition. The Commissioner of Building and Housing shall have the power and it shall be his duty to revoke the certificate issued for a refrigerating system whenever a system is not maintained in safe operating condition. When a certificate is revoked, the system shall not again be operated until it has been placed in a safe operating condition and a new certificate issued.

(b) Whenever a system is found to be in an unsafe condition the Commissioner of Building and Housing may require the removal of the refrigerant from the system.

(c) Every refrigerating system containing a Group 2 or Group 3 refrigerant shall be inspected by the Commissioner of Building and Housing or his authorized representative at least once every six months. When such system is found to be in a safe operating condition the Commissioner of Building and Housing shall certify thereto by means of an endorsement upon the original certificate. Such endorsement shall include the date of the inspection and the signature of the inspector.

177-8. EXISTING HAZARDOUS INSTALLATIONS. When an existing installation does not conform to the provisions of this code and is deemed hazardous to life or property by the Commissioner of Building and Housing, the Commissioner of Building and Housing shall require such changes or alterations as he deems necessary to eliminate such hazard

and shall prohibit the operation of such system until such hazard is removed.

177-9. REGISTRATION AND BOND.

(a) No permit for installation or alteration of a refrigeration system shall be issued except to a person, firm or corporation registered under the applicable provisions of Chapter 183, "Registration, Licensing, and Certificates of Qualification."

(b) Whenever a permit is required for the installation or alteration of a refrigeration system, the person making such installation or alteration shall furnish a bond in the form and amount established therefor, as a guarantee of compliance with the provisions of this code and other applicable laws and ordinances.

The following lists the text of changes made in the ASA B9 code:

CHAPTER 180. NATIONAL STANDARDS (Excerpts)

NOTE: Chapter 180 will be a list of the titles, numbers and date of the national standards included, by reference, in the code. No dates of issue for the national standards mentioned in the code are being included elsewhere in the code.

It is intended that this chapter of the code will undergo annual review with revision when necessary.

Chapter 180 will have an opening statement to the effect that,

180-1. "Standard specifications, codes and other standard requirements mentioned in other chapters of this code, either by name or by number, or by both, shall be those fully identified in this chapter by name, number and date of issue."

(a) American Standard Safety Code for Mechanical Refrigeration of the American Standards Association, ASA B9, except as follows:

1. ASA B9, Section 5, REFRIGERANT CLASSIFICATION.

Add paragraph 5.14:

"5.14. A refrigerant not included in the above 'refrigerant classification' shall not be used in or operated in a refrigerating system until such refrigerant has been passed upon and approved by the Board of Building Standards and Building Appeals and has been classified by the board in either Group 1, Group 2, or Group 3."

ASA B9, Section 7, PUBLIC ASSEMBLY OCCUPANCIES.

2. ASA B9, Paragraph 7.10.

Substitute: "No refrigerating system shall be installed in or on public stairways, hallways, lobbies, entrances or exits, except that unit systems containing not more than 30 lbs. of a Group 1 refrigerant may be installed in lobbies, provided that free passage is not obstructed."

3. ASA B9, Paragraph 7.11.

Change first line to: "Refrigerant piping or tubing containing other than a Group 1 refrigerant shall not be carried."

4. ASA B9, Paragraph 7.30.

Change to: "Group 2 refrigerants shall be used only in unit systems containing not more than 12 lbs. of refrigerant, or in systems containing not more than 1,000 lbs. of refrigerant where all refrigerant containing parts are within a Class T machinery room."

ASA B9, Section 8, RESIDENTIAL OCCUPANCIES.

5. ASA B9, Paragraph 8.11.

Substitute: "No refrigerating systems, other than unit systems containing not more than 4 lbs. of refrigerant, shall be installed in public hallways, lobbies, entrances, or exits, except that unit systems containing not more than 30 lbs. of a Group 1 refrigerant may be installed in lobbies. No refrigerating system shall be installed so as to obstruct free passage."

6. ASA B9, Paragraph 8.12.

Change first line to: "Refrigerating piping containing other than a Group 1 refrigerant shall not be carried through floors."

ASA B9, Section 9, COMMERCIAL OCCUPANCIES.

7. ASA B9, Paragraph 9.11.

Change to: "No refrigerating systems other than unit systems containing not more than 4 lbs. of refrigerant shall be installed in public hallways, lobbies, entrances, or exits, except that unit systems containing not more than 30 lbs. of a Group 1 refrigerant may be installed in lobbies. No refrigerating system shall be installed so as to obstruct free passage."

8. ASA B9, Paragraph 9.12.

Change first line to: "Refrigerant piping containing other than a Group 1 refrigerant shall not be carried through floors."

ASA B9, Section 11, INSTALLATION REQUIREMENTS.

9. ASA B9, Paragraph 11.30.

Substitute: "The installation of all electrical equipment and wiring shall be in accordance

with the provisions of Chapter 176, ELECTRIC WIRING.

10. ASA B9, Paragraph 11.60.

Change to: "Each refrigerating machinery room shall be provided with tight-fitting door or doors and shall have no partitions or other openings that will permit the passage of escaping refrigerant to other parts of the building."

11. ASA B9, Paragraph 11.61.

Change to: "Each refrigerating machinery room shall be provided with means for ventilation to the outer air. The ventilation shall consist of windows or doors opening directly or indirectly to the outer air of the size shown in Table 1, or of mechanical means capable of removing the air from the room in accordance with Table 1. The amount of ventilation for refrigerant removal purposes shall be determined by the refrigerant content of the largest system in the machinery room."

12. ASA B9, Paragraph 11.70.

Omit.

ASA B9, Section 12, REFRIGERANT PIPING, VALVES, FITTINGS AND RELATED PARTS.

13. ASA B9, Paragraph 12.28.

Omit.

14. ASA B9, Paragraph 12.31.

Change paragraph (c) to: "(c) Each liquid and each suction branch header. This shall not, however, be construed to mean inlet and outlet pipes of each evaporator."

15. ASA B9, Paragraph 12.51.

Substitute: "Refrigerant piping shall not be placed in any elevator, dumbwaiter or other shaft used for transportation of persons or objects, nor in any shaft that has openings to public hallways, exit stairways or exit passageways or to rooms or spaces used for human habitation. Refrigerant piping containing other than a Group 1 refrigerant shall not be placed in public hallways or corridors, lobbies or stairways, except that such refrigerant piping may pass across a public hallway or corridor, if there are no joints in the section in the public hallway or corridor, and provided outside diameter or less is contained in a rigid metal pipe. No piping shall be installed so that free passage will be obstructed."

16. ASA B9, Paragraph 12.52.

Change first line to: "Refrigerant piping containing other than a Group 1 refrigerant, with or without insulation covering, . . ."

ASA B9, Section 13, DESIGN, CONSTRUCTION, AND SAFETY DEVICES.

17. ASA B9, Paragraph 13.35.

Change to: "All pressure relief valves for refrigerant containing vessels shall be set to function at a pressure not to exceed the minimum test pressures listed in Section 14.13 Table 3, 'Test Pressures.'"

18. ASA B9, Paragraph 13.44.

Change to: "The discharges of pressure relief devices and fusible plugs on all systems containing more than 30 lbs. of a Group 2 refrigerant, except those used to protect compressors, shall be conducted to the outside not less than 12 ft. above grade level, and not closer than 10 ft. to any opening in the building or in any adjoining building, or closer than 20 ft. to any fire escape or outside stairway; and the discharge outlets shall be turned downward. When Group 3 refrigerants are used, such discharges shall be arranged and located as directed or approved by the Board of Building Standards and Building Appeals of the City of Cleveland."

ASA B9, Section 15, INSTRUCTIONS.

19. ASA B9, Paragraph 15.20.

In the fourth line after the word "card," add: "under glass."

20. ASA B9, Paragraph 15.30.

Change the second line to: "an easily legible card under glass, permanently attached and"

21. ASA B9, Paragraph 15.51.

Change to: "No refrigerant shall be stored in a room which houses a refrigerating system that contains less than 20 lbs. of refrigerant."

22. ASA B9, Paragraph 15.61.

Change to: "Refrigerants withdrawn from refrigerating systems shall be transferred only to approved containers designed to contain the particular refrigerant withdrawn. No refrigerant shall be discharged to a sewer."

23. ASA B9, Paragraph 15.62.

Substitute: "When refrigerants are withdrawn from a refrigerating system the containers into which they are discharged shall be carefully weighed each time they are used for that purpose and the containers shall not be filled in excess of the permissible filling weight for such containers prescribed in the Interstate Commerce Commission's 'Regulations for the Transportation by Rail of Explosives and other Dangerous Articles in Freight, Express and Baggage Services, including Specifications for Shipping Containers,' effective Oct. 1, 1930, with supplements 1 to 18 inclusive."



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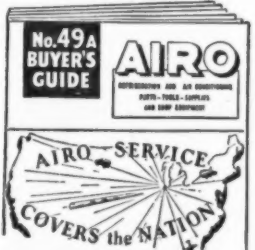
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Wholesaler Loans Testing Instruments Free To Sell Idea of Balancing Coils, Compressors

By C. Dale Mericle

CLEVELAND—In trying to sell his customers on the idea of "balancing every coil to every condensing unit," Jim Downs of Refrigeration Supplies, parts wholesaler here, has hit upon a plan that not only helps contractors and servicemen, but is a good business-builder for his own firm.

Refrigeration Supplies has acquired a number of expensive testing and recording instruments which it loans free of charge to customers who want to check their installations.

"The instruments cost \$1,500, but they've been worth every penny of it," says Downs, who recalled recent instances of how these recorders have helped contractors.

"One contractor was threatened with suit by a florist, who claimed that the florist box installation made by this contractor was not holding the temperature down and flowers were spoiling.

"We helped the contractor sneak a running time recorder into the box, and this showed that the machine was off from 10 at night until the morning. When the owner was confronted with the record, he finally admitted that he had been switching the system off at night to save electricity," explained Downs.

Using the instruments for such "detective" work as this is unusual, because their chief purpose is to improve the operation of systems by indicating what adjustments are necessary.

Not only is greater accuracy obtainable, but the jobs can be done much more quickly, points out Downs.

"We had one job in a slaughterhouse where there were eight expansion valves in one room. All the valves were incorrectly set. Using our instruments, in one hour we had all the valves readjusted right on the button," he says.

For this one, Downs used a potentiometer with two thermocouples.

"This potentiometer is the handiest instrument I've ever had," Downs declares. "It is very useful in checking expansion valves. You can clamp a thermocouple on each end of a coil and get the temperatures in 30 seconds. If the valve is out, it can



Jim Downs of Refrigeration Supplies proudly exhibits his collection.

be adjusted right down to a 'T'."

Although the potentiometer is not of the direct-reading type, Downs has had charts prepared which show the temperature corresponding to the potentiometer reading in units of EMF (electro-motive force) for various room temperatures.

Besides the potentiometer and running time recorder, the firm has a velometer for checking air speeds on air conditioning or blower units; two recording thermometers (one self-contained, the other with remote bulb); a temperature-humidity recorder; a pressure-vacuum recorder; two humidity indicators; and volt-amp-wattmeters.

The recording instruments are designed for 24-hour charts, but Downs points out that usually a serviceman can get a pretty good picture in five or six hours.

Recorders are especially useful "on the jobs that always behave beautifully while you're there but act up as soon as you're gone," Downs emphasizes.

Because many servicemen may not be familiar with the proper use of these instruments, Downs will send along a man from Refrigeration Supplies to help the serviceman check the installation. There's no charge for his services, either.

All a contractor or serviceman has to do when borrowing one of the instruments is to sign a card. No deposit is necessary.

As Downs said, his chief interest is in getting the trade to balance

every coil to every compressor.

"In selecting coils and compressors, usually it's impossible to find two that match exactly, so the only way you can usually balance out the job is by controlling the running time of the compressor. These instruments will help you do that."

That loaning instruments not only makes for better jobs, but improves business for the wholesaler was also indicated.

"There was a contractor out at one end of town that we had never been able to get as a customer," Downs recalls. "Recently, though, he finally came to us to borrow some instruments and became a good customer."

Accounts Receivable Situation Brightens

CHICAGO—Results of its ninth quarterly survey of accounts receivable lead the Chicago Association of Credit Men to believe that the final quarter of the calendar year will be "quite satisfactory"—if strikes don't change the present outlook.

The survey represents about 300,000 accounts in all parts of the country. Results cover the Aug. 31 standing of accounts, which is compared with figures for May.

G. T. Thomas, association president, reported that the discounting record held up well during the summer months, although the August percentage (56.4) was down slightly from the May figure (59.5).

"The paying when due record of 32.2% for August against the May figure of 28.7% is, of course, a reflection of the trend in accounts discounting," he said.

"The findings of accounts past due is another encouraging figure. The August survey shows a percentage of past due of 11.4% compared with 11.5% for May, 1949.

Appliance Parts Jobbers Meet Oct. 20-22, St. Louis

DETROIT—The Appliance Parts Jobbers Association, Inc. will hold its regular fall general meeting at the Statler hotel in St. Louis from Oct. 20 through Oct. 22, Wilfrid L. Cloutier, secretary-treasurer, announced recently.

The general meeting is scheduled to begin at 2 p.m. on Thursday, Oct. 20 and run until about 6 p.m. It will resume at 9 a.m. on Friday and continue throughout the day.

The executive board is scheduled to meet on Thursday morning before the general meeting starts. If necessary, the meeting will be continued on Saturday morning.

At the Friday luncheon session, the jobbers will hear an address by Judge Edward M. Ruddy of the circuit court in St. Louis.

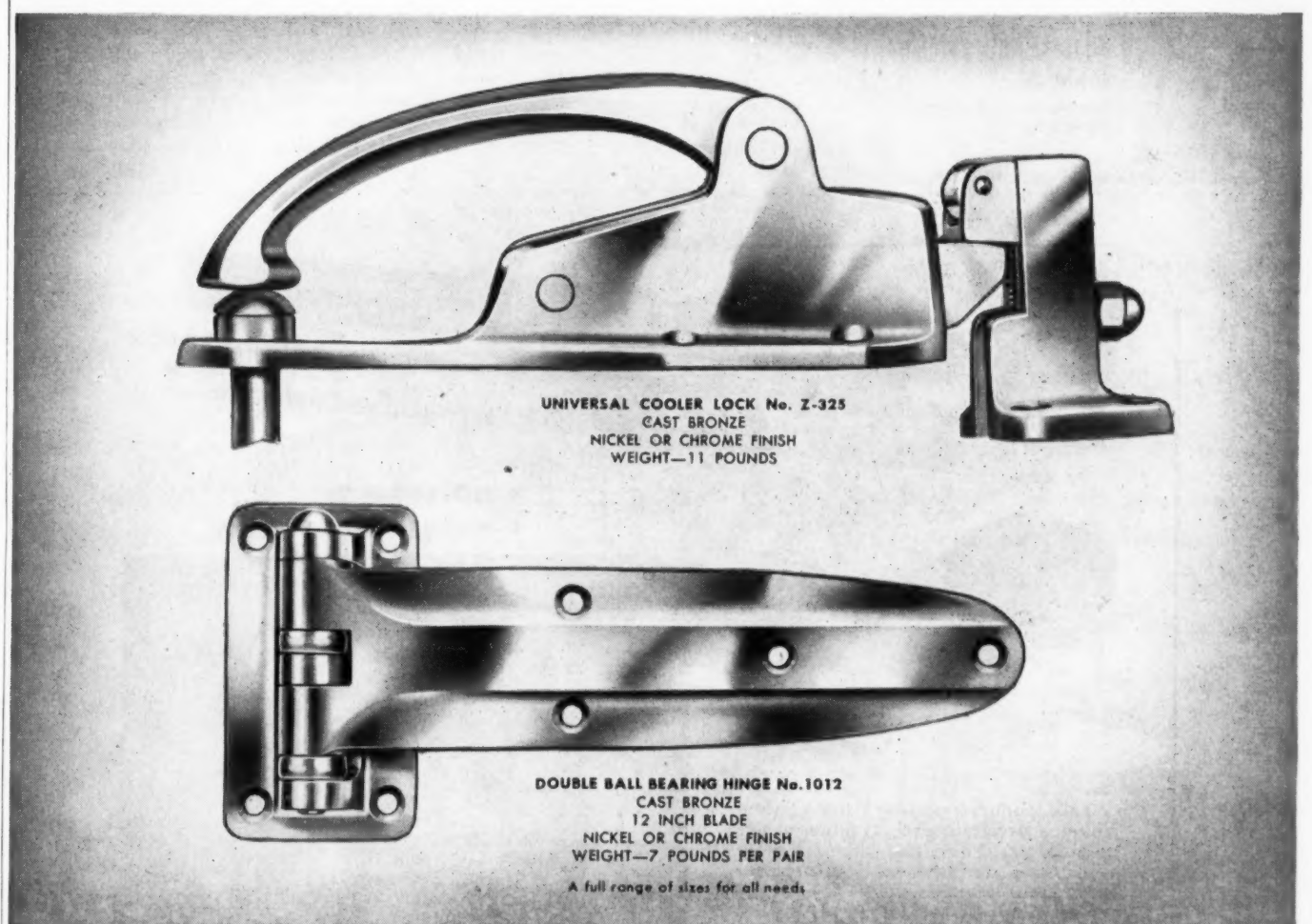
Entertainment is being planned for both Thursday and Friday evenings. A special trip through the Anheuser-Busch brewery has been arranged for Wednesday afternoon before the meetings begin. Afternoon entertainment for the ladies is being prepared by the group.

Prices Reduced by American Kitchens, Freight Prepaid

CONNEERSVILLE, Ind. — Lower prices on American Kitchens, with freight prepaid on a carload basis for American Kitchens dealers and distributors, have been announced by F. F. Duggan, general sales manager of the American Central Div., Avco Mfg. Corp.

Under the new pricing, now in

effect, the deluxe line of sinks will start at a suggested retail of \$119.95 for the 42-in. model and run to \$189.95 for the 66-in. double bowl model. Economy sinks suggested prices are from \$79.95 for the 42-in. size to \$149.95 for the 66-in. model. Wall and base cabinets have been comparably reduced, Duggan said.



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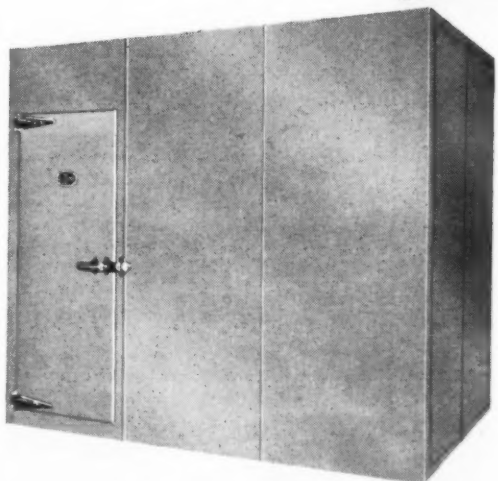
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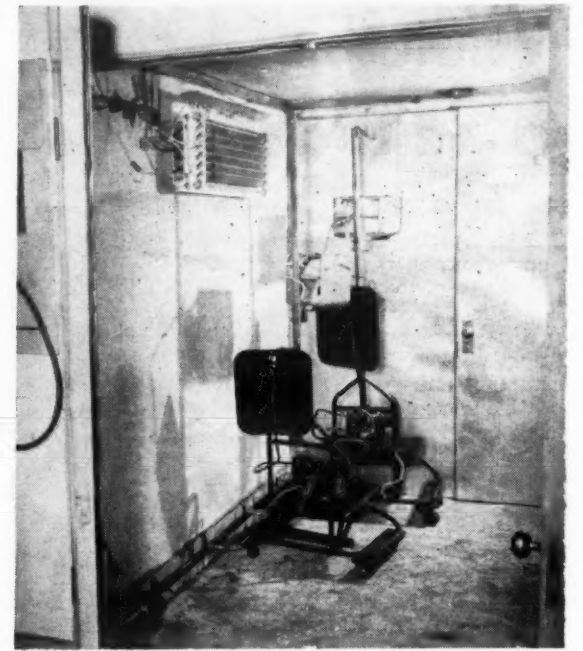
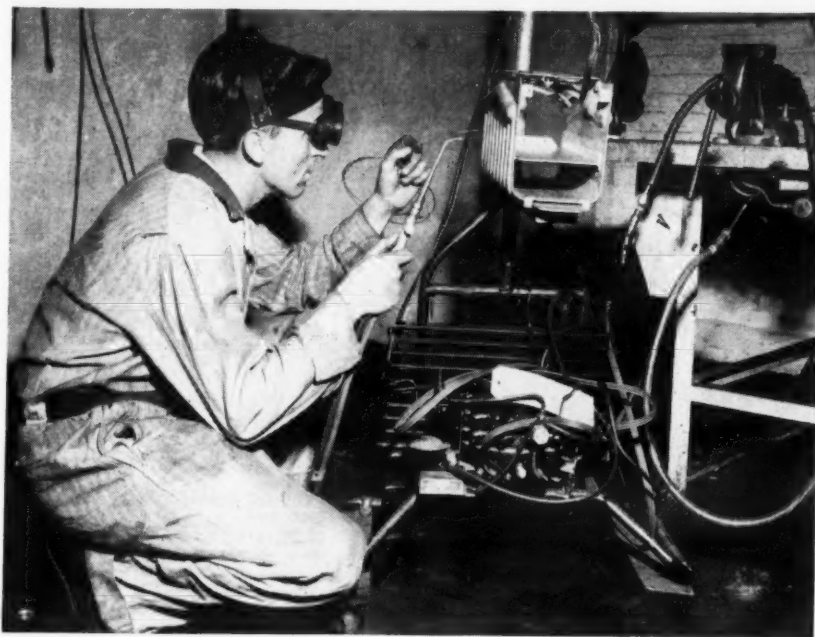
General Refrigeration

Division

Yates-American Machine Co.,
Beloit, Wis.

Service Firm Tells How It Fixes Old Frigidaire Sealed Systems on Flat Fee Basis for Dealers

RIGHT: Operating a reconditioning service on old Frigidaire sealed systems, North Town Refrigeration Corp. in Chicago finds that replacement evaporators and condensers are not available. Paul Zurr, in charge of the sealed unit repair department, makes some repairs with silver solder, as shown here.



ABOVE: After a system has been repaired and tested for leaks by filling it with nitrogen under 110 lbs. pressure and submerging it in water, the system then goes into the dehydrating-vacuum oven. For 20 hours it is hooked up to a 28-in. vacuum line.

CHICAGO—Dealers and servicemen who have inoperative Frigidaire household boxes on hand can make a profit on these sealed systems by having them repaired, believes North Town Refrigeration Corp., which operates a factory-authorized repair service here.

The hermetically sealed Meter-Miser condensing unit employed in these refrigerators is not cut open at the North Town shop, but the complete system is given a thorough going over and the unit replaced, if necessary, with a factory-rebuilt job.

Approximately 1,000 systems have been handled by the firm since it was set up by Frigidaire early in 1947 to do this work, according to T. J. Reedy, head of the firm.

North Town, in addition to offer-

ing this service, is also a Frigidaire household, commercial, and air conditioning dealer, and maintains a large service organization.

The shop for sealed unit repairs, however, is operated independently of the conventional and commercial service departments.

Two classes of repairs are provided for dealers on the sealed units. Models from 1938 on in sizes of 4 to 9 cu. ft. are completely repaired and the compressor replaced if necessary for a charge of \$35. This carries a one-year guarantee but does not include freight charges, which the dealer must pay, or replacement of condenser fan, relays, or switches, if the latter are necessary.

Models from 1934 to 1937 in the 4 to 9-cu. ft. category that can be

repaired without replacing the compressor also cost \$35 f.o.b. the North Town shop. However, if the compressor on these older models is found to be inoperative, the system cannot be repaired, and there is no charge involved.

In explaining the routing of the jobs that come in for repair, Ed Clark, supervisor, suggests:

"If the dealer is some distance away from Chicago, he should let us know that he is shipping a unit in so we can be on the lookout for it. The local boys usually just bring the machines in themselves."

Usually the dealer sends in complete hermetic system consisting of the condensing unit assembly, lines, and coil. Where the complete cabinet is shipped in, North Town adds another \$3 to cover taking the unit out of the box and then reassembling it.

When North Town handles the repair job on a retail basis for its own local accounts, it makes a flat charge of \$54 to the customer.

Clark's first step when a sealed unit comes in for repair is to write up a service work order which gives all the details. From this he prepares a shop work order which is sent to the service shop. As the work progresses, the shop work order is filled in with time and material costs, and when the job is completed, this record is returned to Clark.

"The balance of the service work order is then filled out and a warranty number issued," Clark explained.

"If we aren't familiar with the dealer, we then send him a postcard telling him the unit is ready, and will be shipped on receipt of his check. When we know the customer we simply ship the repaired unit c.o.d."

"Standard practice is followed in handling in-warranty complaints on these reoperated units," states A. E. Kull, promotion manager for North Town. "If the unit fails, we repair it again free of charge, the customer merely paying the freight. Our percentage of 'repeats' has been very low, however."

Paul Zurr, who is in charge of the sealed unit repair department, outlined the actual repair procedure on the Meter-Miser systems.

"The first job, of course, is to uncrate the system. Here we watch to make sure the system is intact, with no broken lines, etc."

"If it is a pre-1938 model we first test the system to make sure the trouble isn't in the pump, because we can't repair or replace the pumps on those early machines."

"We plug the older units in to see if they start, check the bearings and general operation of the motor by means of a wattmeter, and then open

the lines to see if they're corroded. Corroded lines mean we have to turn down the job because we can't clean them out satisfactorily," Zurr said.

"The newer units (1938 and later) get the same test, but we don't usually have to do it in a hurry because we know we can repair these models. After we've diagnosed the trouble, we then start the repair job."

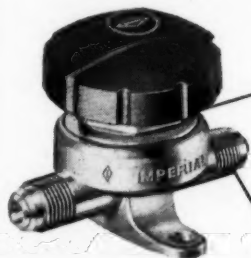
New coils and condensers are not available to North Town for replacement on these machines, so if these items are completely beyond repair the firm does not attempt to handle the job.

"Before working on the system we discharge it. The 'Freon-114' is discharged to the outside air; the oil is blown into a container."

"If the tests showed that the compressor is at fault, we pull the old

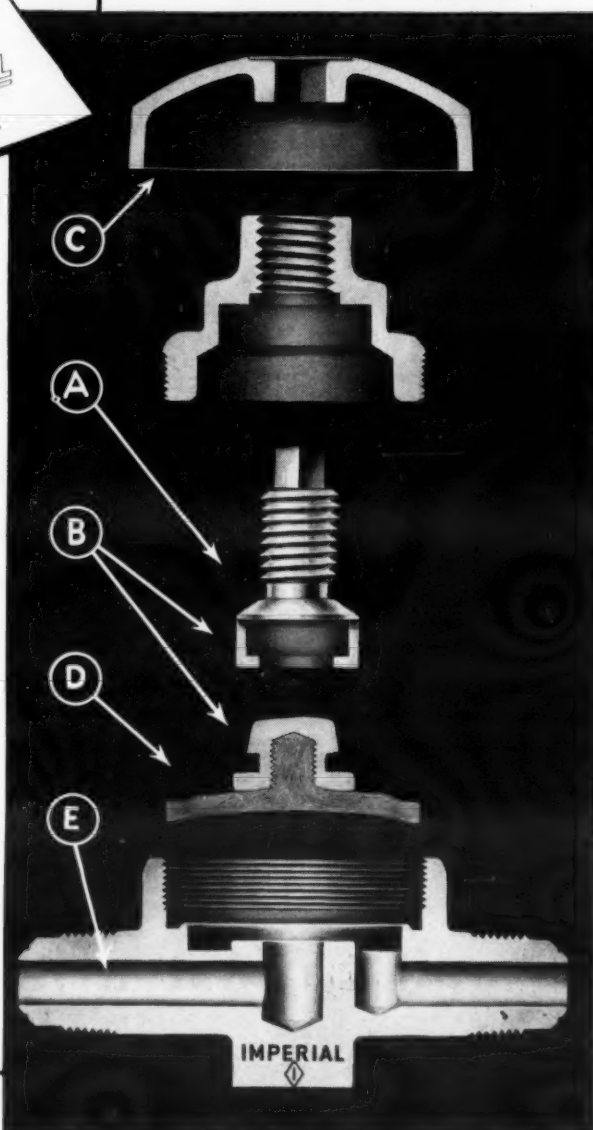
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D. LONG LIFE DIAPHRAGM is impervious to all common refrigerants. In actual tests, has withstood over 1,000,000 openings and closings under refrigerant pressure.

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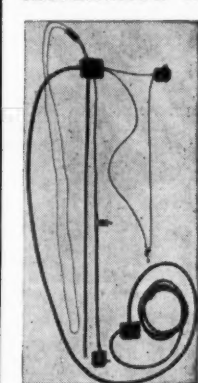
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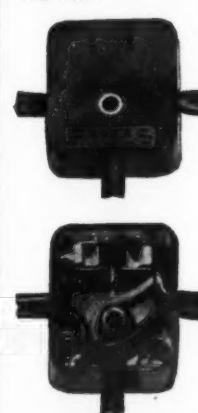


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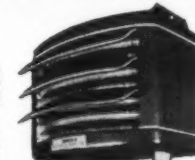
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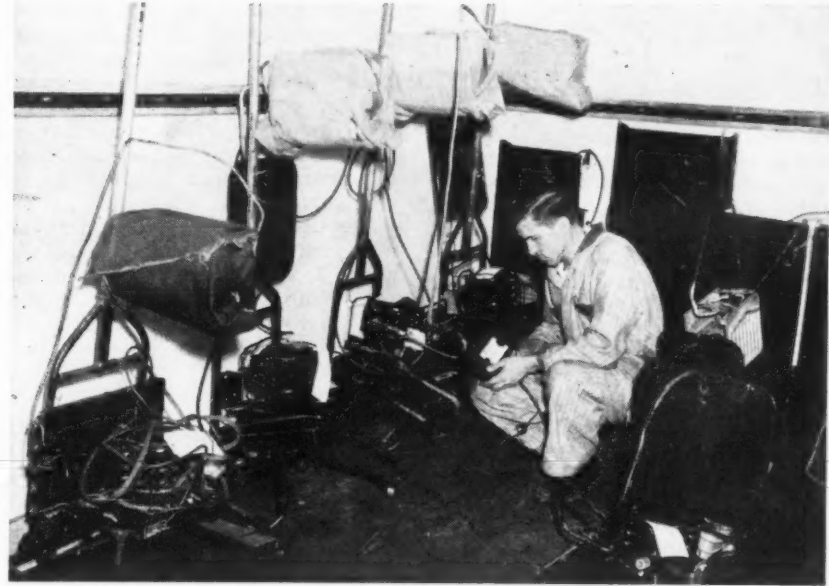
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Test Panel Plays Major Role In Discovering, Ironing Out Faults In Old Units



ABOVE: All the paper work of North Town's sealed unit repair department is handled by Ed Clark, supervisor, who is here taking up a problem with T. J. Reedy (left), head of the firm, and A. E. Kull (right), sales promotion chief.

RIGHT: Most of the testing and repairing centers around this test panel, which is also used for discharging and recharging the systems. Here Paul Zurr is checking the ability of a system to hold a 28-in. vacuum for five minutes.



ABOVE: Final test on the repaired sealed systems is the running test in the "quiet" room. The evaporator is covered with a cloth, the unit is plugged in to see if it refrigerates properly, and Paul Zurr makes frequent checks with a wattmeter. This room is finished in Celotex so the noise level of the repaired units may also be determined.

Thorough Checking of Unit After Repair Enables North Town To Warrant It for Year

(Concluded from preceding page)
unit and install one that has been rebuilt at the factory."

When the tests indicate that coils or condensers have been punctured, they are repaired, using silver solder.

Condenser fan, relays, or switches are replaced if tests show that these are not operating properly.

Final step at this stage is to clean out the system with Syleum spirits.

"After the repairs are made," Zurr explained, "the system is filled with nitrogen to a pressure of 110 lbs and placed in a water bath to look for leaks. If no leaks show up, the assembly is removed from the bath and the water blown off with compressed air. Then the system goes into the drying oven."

Here the unit is connected to vacuum lines which maintain a 28-in. vacuum on the system for 20 hours.

During this period the oven is heated electrically to 200° F., the combination of heat and vacuum being designed to drive off any moisture in the system.

Although the vacuum is held for 20 hours, the 200° F. temperature is maintained for only five hours, this operation usually being done overnight.

When the dehydrating process has been completed, the unit is brought out of the oven and connected to the main charging and testing board.

"We check it to see if it will hold a 28-in. vacuum for five minutes," Zurr said. "If it does, we can proceed, but if the machine won't hold this vacuum it means there are still leaks. We test for leaks again, using nitrogen and the water bath or soap solution."

If the unit passes the vacuum test,

the next step is to charge the system with "Freon-114," alcohol, and oil. The oil is charged into the high side, being pulled in by vacuum as well as gravity. Most of the alcohol and refrigerant mixture is forced into the high side, likewise, but there is usually a certain amount of the charge that must be pulled into the low side of the system.

The amounts of refrigerant, oil, and alcohol that are charged into a unit are carefully measured on graduated scales.

From the charging board the reconditioned unit is moved into the final test room, which is large enough to test 10 units at a time. A cloth is wrapped around the evaporator, and the unit plugged in.

This is a satisfactory method of checking the units for normal frosting and thus satisfactory operation,

Zurr explained. If there is any doubt on this score, thermometers are employed to give a more accurate test.

While the machines are running in the final test room Zurr also makes frequent checks with the wattmeter to make sure the units are okay.

This final test room also serves as a "quiet" room for sound tests. Interior of the room is finished in Celotex backed up with Zonolite insulation. Here the noise level of the compressors can be judged.



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Industry Preview

G-E Air Conditioning Dept. Will Set Up Parts Depot

Departing from the conventional product-type display, the exhibit of G-E's air conditioning department will be set up as a typical parts depot, simulating actual operation. The purpose of the exhibit is to explain and demonstrate products and services available at some 60 parts depots recently established by General Electric throughout the nation.

These depots handle the sale of G-E condensing units up to and including 10-hp. They also stock repair and replacement parts for all G-E condensing units, and G-E sealed condensing units for replacement purposes.

The exhibit will also feature G-E hermetically sealed condensing units for use by refrigerated fixture manufacturers.

Present at the show will be J. D. Hoffman, manager of direct sales; W. F. Benoit, sales manager, manufacturer sales; L. E. Thompson, manager of parts sales and product service; and J. L. Roth, sales manager, parts sales and product service.

Temprite To Have Water Cooler In Operation

Emphasis at the Temprite Products exhibit in booths 610, 612, and 614 will be placed on the Temprite line of self-contained drinking water coolers. Models of each size and type will be in operation demonstrating the latest design feature, a duo-operating foot-pedal flow control.

Of special interest will be a newly-developed instantaneous industrial water cooler. This model has a capacity of 338 g.p.h. (80° to 40° F.) and completes the capacity range in the line from 15 to 1,500 g.p.h. It incorporates many design improvements.

For the carbonated beverage field, Temprite has a crowd-stopper in a full-view cooling and carbonating installation which will be in actual operation. Correct installation and

operating technique will be visually demonstrated.

Arrayed in the background will be a new direct-expansion type storage cooler designed especially for automatic beverage dispensing equipment, the entire line of self-contained bubbler and bottle-type water coolers, oil separators, and temperature control valves.

Temprite personnel in attendance will include L. Emde, general manager; J. J. Goodwin, eastern division sales manager; and E. B. Jennings, service manager. All territorial sales representatives are expected to be on hand.

Dean To Demonstrate Line With Transparent Model

Central feature of the Dean Products Inc. exhibit at the All-Industry Exposition will be a transparent model of the Dean evaporator, demonstrating by the flow of the refrigerant how heat absorption is accomplished.

A conversion unit which is practical for the rebuilding of obsolete ice cream cabinets and soda fountains is expected to be another attention getter. A line of replacement parts and original equipment components for soda fountains will supplement this portion of the exhibit as will several items to assist in the merchandising and handling of ice cream.

Also represented in the booth will be examples of such Dean cold plate applications as a sharp-freezer plate stand, a ceiling hanger assembly for cold storage rooms, and special shapes such as cylinders, L's, and U's as might be required for use in liquid cooling, frozen food cabinets, photographic and developing tanks.

Chicago Seal Co. Plans Working Models of Line

Chicago Seal Co. will again exhibit its complete line of valve plates and working models of seals at the All-Industry Exposition. Willis Stafford stated that the company will not have any new products on display.

3 New Air Conditioning Units In Curtis Booth

Three entirely new self-contained air conditioning units will be shown for the first time in the Curtis Refrigerating Machine Div. space at the All-Industry Exposition. These units complete the Curtis line from 2 tons through 15 tons.

Also featured by Curtis will be a 20-hp. condensing unit and one with from 30 to 40-hp. capacity. The latter will be equipped with automatic capacity reduction.

Gathered at booths 402, 404, 406, 501, 503, and 505 will be Curtis Vice President H. C. Morrison and H. J. Nettler, assistant sales manager; K. T. Rockey, New York regional manager; C. W. Stover, Chicago regional manager; J. P. Gilbert, advertising manager; N. H. Behrend, R. A. Vogt, G. W. Schultz, George H. Helde, and William Fleischer.

Davison Chemical Display Remains a Mystery

Visitors to booths 337 and 339, occupied by The Davison Chemical Corp., will witness a departure in the exhibit for the company's PA-100 silica gel desiccant.

While no details were disclosed, the corporation said the display will be "entirely new."

Davison's promotion will not be confined to the Show area itself. An electric display visible to the attendants, as well as vacationers, is planned for the period of the Show.

Pinnacle Will Show 7 Commercial Models

Five different display cases and two commercial refrigerators will be placed under the scrutiny of visitors to the All-Industry Exposition by the Pinnacle Equipment Corp.

These will include an 8-ft. delicatessen case, an 8-ft. double-duty case, a 10-ft. single-duty case, a 4-ft. full-view case, an 8-ft. wall dairy case, a four-door reach-in refrigerator, and a six-door combination bakery and salad refrigerator.

\$500 Christening



\$500 awaits the refrigeration or air conditioning dealer, contractor, or serviceman who names this Betz cooling unit.

Betz Offers Cash Award for Name For Its New, Inexpensive Cooling Unit

HAMMOND, Ind.—A \$500 award awaits the refrigeration or air conditioning dealer, contractor, or serviceman who can devise an original name with commercial appeal for the Betz Corp.'s new cooling unit, the company announced recently.

Entries must be submitted before midnight, Dec. 31, 1949 to AIR CONDITIONING & REFRIGERATION NEWS, 450 W. Fort St., Detroit 26, Mich. where they will be judged by George F. Taubeneck, editor; Phil B. Redeker, editorial director; and Edward L. Henderson, business manager of the publication.

The cooling unit without a name is claimed by Betz to set a mark for inexpensiveness. One model, the 85-U, which has 85 B.t.u. capacity at 1° T.D., lists at \$46. the other, the 115-U, which has 115 B.t.u. capacity at 1° T.D., lists at \$57.

Operation of this unit which needs a name was described by Betz as follows:

"Air is drawn through the front part of the coil by means of a blade and life lubricated motor.

"A divider within the unit then directs air through each side and rear of the coil resulting in a two-way discharge.

"Peak performance is effected by double cooling of the air as it enters and leaves the cooling unit.

"The drip pan is provided with drain connections. The valve location is inside and is accessible by re-

'Uniflare' Fittings Will Be Shown In Action

The Scovill Mfg. Co. will exhibit a new line of forged fittings, tube fittings for refrigeration, and a line of standard and special industrial fasteners made by the Waterville Div. of the company.

The new fittings are called "Uniflare" and will be demonstrated in action with a typical refrigeration system and typical air conditioning unit. These systems will demonstrate the "non-frosting" feature of the fittings.

Uniflare fittings are self-flaring and produce a leakproof 37° flare merely by tightening the nut into the body, it is stated.

Gilmer Will Unveil New Vibration Pad

A new vibration pad for mounting commercial units will be unveiled at the L. H. Gilmer Co. booth at the All-Industry Exposition. The molded Neoprene pad is fastened to the floor simply by cementing with Gilmer industrial cement, the company asserted.

The mounting is said to be resistant to oil, heat, water, and cleaning compounds and does not harden or compact with use. It can be carried in stock in rolls and cut to length as desired, the company added.

V-belts for refrigeration and air conditioning in standard and special sizes and an assortment of most-needed belts with merchandising aids will again be placed before the booth visitors' eyes.

Offered for appraisal will also be Gilmer wire extension cords and spool wire for use on refrigerators, coolers, compressors, and pumps. Represented, in addition, will be purging hose, air or welding hose, sheaves for light-duty drives, and friction or rubber tape.

moving one screw holding the bottom pan."

The smaller model moves air at 190 c.f.m. and has a cooling surface of 17.95 sq. ft. It measures 8 in. high, 11 1/2 in. wide, and 8 1/2 in. deep and weighs 13 lbs. (shipping weight) it is pointed out.

The larger model moves air at 250 c.f.m. and has a cooling surface of 23.37 sq. ft. It has the same height and depth measurements as the 85-U, but is 17 1/2 in. high. It has a shipping weight of approximately 16 lbs.

Both units use 1/2-in. tubing. Betz says that the cooler can be used for backbars, direct draws, small reach-ins, and a number of other applications requiring a 1/4-hp. compressor.

The contest rules, as announced by Betz, are as follows:

"1. Five hundred dollars in cash will be awarded to the contestant who submits the winning name for the product described above.

"2. Contest is open to refrigeration or air conditioning dealers, contractors, and servicemen.

"3. Entries will be judged solely on the basis of originality and commercial appeal.

"4. Only one entry will be accepted from each contestant. Do not submit artwork, documents, etc.

"5. Contest closes midnight, Dec. 31, 1949. All entries must be postmarked not later than that date.

"6. Submit all entries to Editor, AIR CONDITIONING & REFRIGERATION NEWS, 450 W. Fort St., Detroit 26, Mich.

"7. In the event of a tie, duplicate awards will be made. Decision of the judges will be final.

"8. All entries become the property of Betz Corp., Hammond, Ind. None will be returned.

"9. The contest committee will consist of George Taubeneck, editor; Phil Redeker, editorial director; and E. L. Henderson, business manager of AIR CONDITIONING & REFRIGERATION NEWS."

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Cabinet Lines, Units and Special Accessories Will Get Spotlight

Friedrich Will Exhibit 3 'Speed-line' Refrigerators

Three new "Speed-line" open-view refrigerators will be exhibited by Ed Friedrich, Inc., in booths 754, 756, 758, and 760.

They are the double-duty meat refrigerator (model OC10R), the double-duty vegetable case (model OV11R), and a double-duty, self-contained frozen food case (model OF8S).

The design of all three models features flowing lines with rounded corners. Ends are removable for continuous line-up, and the cases are equipped with mirrors. Doors to the storage space have concealed Oilite hinges and latches and are automatic foot operated.

Another advancement to be featured is the "Nofrost" valve on the frozen food case. This valve automatically defrosts the case in six to eight minutes without letting the food melt, according to Friedrich.

The frozen food case is, as are the other refrigerators, equipped with the "exclusive Friedrich air conditioning

process, FloatingAir." In this process, it was explained, air is drawn to the bottom of the unit where it is purified, then passed between multi-finned cooling coils, and forced through ducts to the top of the case, finally floating down around the food.

The refrigerators, in which the patented lighting system, "Coolite," is incorporated, have white porcelain-on-steel covering the top, front, and ends, and "Alclad" aluminum inner linings which cover both the bottom coil compartment and back air duct.

Aminco Offers New Valve And Water Strainer

The Aminco Refrigeration Products Co. will display its new crankcase suction pressure regulator valve, of particular interest to those who design, manufacture, install, or repair equipment such as refrigerated trucks and hot defrost applications, or any equipment likely to be subjected to sudden overloads, high starting temperatures, or low power line voltages.

Also to be featured is a newly designed water strainer, an improved line of oil separators, and additional replacement high side float models for top-mounted units.

Marlo To Display Ceiling, Floor Conditioning Units

A variety of new ceiling and floor-type air conditioning units will be displayed in booths 305, 307, 309, and 311 by Marlo Coil Co.

The units and the features of each that will be dramatized at the exhibit are:

EC 7½ evaporative condenser—aluminum casing hot tinned coil; CT 7½ cooling tower—stainless steel casing, eliminators, and deck surface; 'tween the rails' unit, scale model—stainless steel; all copper dehumidifier—12 sq. ft. face.

F-625 air conditioning unit—new type filter section; standard unit cooler; DUC unit for ammonia—heat exchanger, thermal valve; window unit; cooling coils—¾ and ½ tubes, aluminum fins, and copper fins; non-freeze coil—all copper.

Lewin-Mathes To Show Seamless Copper Tubing

Alan B. Lewin of Lewin Metals Div., Lewin-Mathes Co., reports that his firm's exhibit "is going to be seamless copper tubing and some items of wrought fittings as well as views of our plant and operations within it. Other than that, we will be exhibiting copper tubing."

Slop-Over Problem To Get Attention at Phillips Booth

If you have ever been confronted with the problem of liquid slugging in compressors, you will want to see and examine the Phillips Liquid Return system that will be shown off at the H. A. Phillips & Co. booth No. 644 at the All-Industry Exposition.

The system is claimed to be a simple, practical way to protect machinery from the "slop-over" problem. Bill Richards, chief engineer, and David Newton, New York representative, will staff the booth. Harry Phillips is ill, but Mrs. Phillips reports that he is well on his way to recovery.

'Step Coil' Has Top Spot In Wolverine Booth

Highlight of the Wolverine Tube Div. display will be the new Wolverine "Step Coil" for copper refrigeration tube.

Wolverine "Trufin Bi-Metal" (aluminum Trufin with a variety of optional copper alloy liners) and improved spun-end tubular parts will be placed on view.

In addition to a review of all company products, the exhibit offers a close-up of the "Capilator"—the capillary tube for restriction purposes.

Wolverine representatives at the Exposition are: W. H. Maxwell, director of sales; G. D. Potter, general sales manager; and H. A. Harty, advertising and sales promotion manager.

Koch Has Spanking New Frozen Food Display Case

A gala preview of the spanking new Koch frozen food display case—never before shown to dealers—will be staged in the Koch Refrigerators booths—350-52 at the All-Industry Exposition.

Complementing the star attraction will be a Zerostream dry beverage case model 8218 and a dairy display case, model 306, with three refrigerated shelves.

Sam Glass, advertising manager for Koch, offered this "casual" description of the frozen food case:

"The cabinet is 7 ft. long, is of all steel construction, and is insulated throughout with 4 in. of Zeropak. The front has four panes of plate glass. The mirror is copper backed.

"We have a novel double price tag molding that will handle either two rows of narrow price tags or one row of large price tags.

"We have in it an exclusive 'Frost Blotter' which will prevent frost accumulation on the plate dividers. The exterior of the case is of porcelain and stainless steel together, of course, with the mirror."

The dry beverage cooler cools bottled goods to from 28 to 31° F. by passing cold air over, under, and around the bottles. It will hold 18 cases of bottles. The cooler is said to be adaptable for use under a bar, as a service unit, or as a bar by itself.

The dairy case offers three refrigerated merchandising levels whose temperatures can be regulated within the range from freezing to 45° F. Each shelf is said to have its own individual, natural convection, stack-type cooling system.

The unit has glass sides and front and a flat surface above the reflecting mirror where non-refrigerated foods can be displayed.

Kramer Trenton To Feature Fin Surface Fabrication

A detailed exhibit of a new method of fabricating fin surface, three working models covering small tonnage evaporative condensers, Thermo-bank illustrating automatic hot gas defrost, and a Kramer developed condensate pump with no moving parts are some of the items expected to rivet attention on the Kramer Trenton Co. booth.

There will be a number of newly designed small capacity evaporators as well as a complete line of air conditioning units from 2 to 10 tons on display.

The firm will have a large staff on hand to answer questions. This will consist of: Israel Kramer, S. C. Segal, G. Frie, Harry Klingler, Frank C. Obert, Ray S. Graham, M. E. Corbin, I. H. Cohler, R. H. Holland, L. J. Freitas, L. J. Sudderth, E. G. Koyl, and A. R. Tankle.

Grammes Spotlights Soda Fountain Beverage Dispenser

A beverage dispenser manufactured for the soda fountain trade will be spotlighted at the L. F. Grammes & Sons, Inc. booth at the All-Industry Exposition.

The dispenser will be set up against a background of name plates, bezels, escutcheons, decorative trim, stampings, wire formings, and sales promotional articles all made of metal.

To explain the company's products to visitors will be Robert Lamont, vice president; Mark Seibert, advertising manager; and Robert W. Weindel and Robert J. Craven, sales representatives.

McIntire To Demonstrate Moisture Control Units

The McIntire Connector Co.'s display will consist of test assemblies in operation demonstrating moisture indication and the positive moisture pick-up capacity of the company's driers and moisture control units.

Tests will be performed under actual refrigeration conditions with additional test equipment to demonstrate the stability and shock resisting qualities of the new-type DC internal assembly.

Bishop To Show Cases

R. H. Bishop Co. will display six models in its 1950 line of high and low temperature open-type display cabinets, ranging from 14 to 24-cu. ft. capacity.

Dealer-Utility Cooperation



Although this appears a little late in the season, the window pictured above is an example of utility cooperation in the promotion of air conditioning. This display by Wisconsin Power & Light Co. was designed to create a desire for air conditioning on the part of the public. Dealers in the area cooperated by furnishing the various types of equipment. This exhibit coincided with a prolonged heatwave and was credited with the sale of six units.

HW-75

RA-7

RWA-5

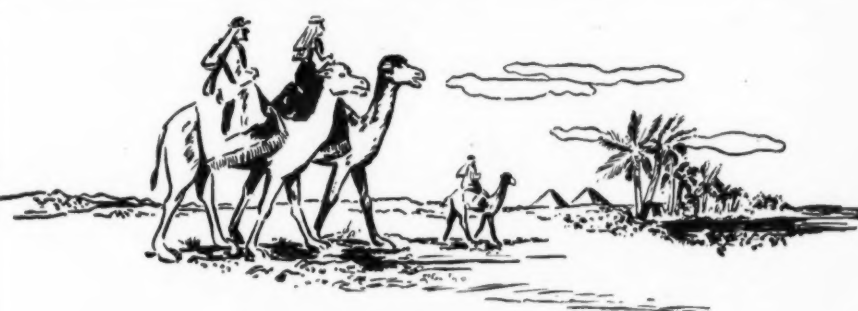
PARMetic

Must See

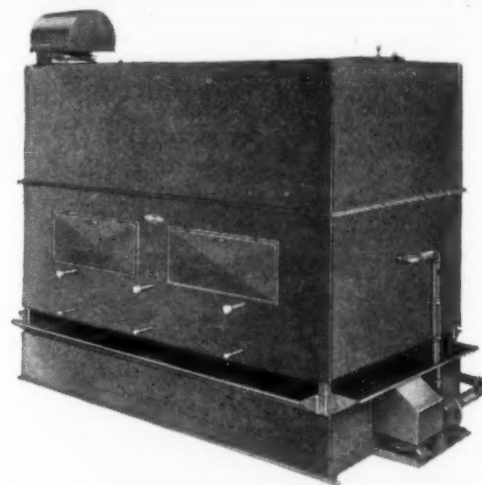
PAR'S Exhibit of:

- New Fractional H.P. Line;
- New PARMetic Line;
- New Combination Air and Water Cooled Line;
- New 7½ H.P. Line:

Refrigeration and Air Conditioning
Exposition...Atlantic City...Nov.14-18
BOOTHS 216-18-20



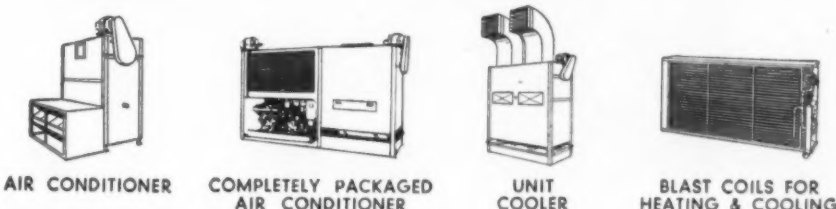
Where Water Is the Problem... CHOOSE GOVERNNAIR EVAPORATIVE CONDENSERS



If you think a camel goes a long way on a little water . . . then you should see this Governair Evaporative Condenser operate! Save up to 95% of water normally used by water-wasting type condensers! Eliminate waste-water disposal problems and pumping costs, too. Engineered to give maximum efficiency and performance at a minimum cost.

Choose a Governair Evaporative Condenser, and forget those water problems!

Governair Evaporative Condensers are also furnished as an integral part of universally acclaimed Governair Packaged Air Conditioners.



ORIGINATORS OF COMPLETELY PACKAGED AIR CONDITIONERS



GOVERNNAIR CORPORATION • 513 N. BLACKWELDER • OKLAHOMA CITY, OKLA.



Preview!

New Developments Galore To Go on Display at Show In Atlantic City

Capillary Tube Assemblies In Kenmore Co. Exhibit

On view in booth 205 will be the complete line of liquid line strainers (flare end and spun end types), spun-type low-side driers, accumulator-driers, accumulators, screen assemblies, and capillary tube assemblies manufactured by Kenmore Machine Products, Inc.

Representing the firm will be Lawrence C. Smith, president; James A. Smith, secretary-treasurer; James E. Russell, sales manager; and the following field sales representatives: George I. Boone, George B. Boone, and Jack A. Swain, New York City; Jules W. Beneke, St. Louis; Marc A. Shantz, Chicago; Leo J. Freitas, Dallas, Tex.; Russell T. Smith, John Smith, and Ralph Hiatt, Adrian, Mich.; Joe E. Parker, Atlanta; W. Cliff McLoud, Denver; and J. A. McLaren, Los Angeles.

New 'Catch-All' Planned To 'Collect' Visitors for Sporlan

Headline items in the Sporlan Valve Co. space will be the company's new, large-capacity "Catch-All" filter-drier and a solenoid pilot control.

Made in three sizes, the larger Catch-Alls are rated on a "liquid flow" basis rather than on a "tonnage" basis. All three sizes have replaceable cores molded of the same desiccant used in the small-capacity units.

Each core is the same size and is "a hard, inestimably porous, thick-walled cylinder, so retained in the substantial Catch-All shell that it is vibrationproof," it was explained. It is also mounted in such a way that, according to Sporlan, maximum contact of the refrigerant with the desiccant is assured.

"It is impossible for the hard porous core of highly-activated desiccant

to pack, powder, or channel," the company claims. "Also, the molded core-cylinders are extremely easy to replace, as they retain their original diameter and no 'swelling' occurs."

Sporlan will also bring to the show its complete line of thermostatic expansion valves, solenoid valves, refrigerant distributors, strainers, and small-capacity Catch-Alls.

Company personnel attending the exposition will include H. T. Lange, president; H. F. Spoehrer, vice president and treasurer; W. T. Carmody, controller and director of customer relations; W. F. Wischmeyer, chief engineer; C. C. Grote, eastern sales manager; and M. G. Haynes, western sales manager.

The following sales engineers will also attend: J. T. Barry, W. A. Reichenbach, Ted Silary, Art Javes, J. E. Dannels, E. C. Fockler, D. M. Lawson, P. J. McCarty, and W. H. Krack.

Use of Stainless Steel In Mouldings To Be Shown

John Lees Div. of The Serrick Corp. is preparing a display that will emphasize "the brilliance of stainless steel for shelf frames, throat moulding, angles, channels, and decorative trim."

The division specializes in the manufacture of stainless mouldings for the refrigeration and air conditioning industries. Offering "hundreds" of standard rolled shapes and having engineering and production facilities for all types of special moulding designs, John Lees will bring to Atlantic City complete information on all types of moulding applications.

It will also provide information on its "extensive" electrolytic polishing facilities. It notes that this type of polishing "has gained wide favor for use on interior refrigeration parts."

Manning the booth (432) will be Gordon O'Gara, assistant sales manager; Marvin Greer, eastern representative; and John Warner.

'Big' Things Are Planned In Richard Armstrong Booth

Big presents come in small packages? Could be. But getting big equipment in a small booth can turn out to be quite a job.

Nonetheless, it's one that the Richard M. Armstrong Co. manufacturer of heat transfer products, has been able to work out satisfactorily. If you want proof, the Armstrong Co. plans to have a display of suction heat exchangers from 8 tons to 152 tons—all mounted on one stand.

New items in the Armstrong line are its larger heat exchangers in the 112-ton and 152-ton sizes. These have basic ratings at 40° F. suction and 105° F. liquid. The design of these new products is the same as the rest of the line, including the Armstrong feature of practically no suction line pressure drop.

To give visitors a close look at how components of shell and tube apparatus fit together, the company will show weld sections from alloy materials such as 70-30 cupro-nickel, monel, stainless, aluminum, etc. In addition to cut-out sections of condensers revealing tube hole details, Armstrong will have on hand some sample finned tubes.

Other products scheduled for display are an 80-ton discharge oil separator and a 15-ton "Freon" shell and tube condenser.

How 'Bundyweld' Tubing Is Formed To Be Shown

How "Bundyweld" tubing is formed from a single strip of copper-coated steel will be shown in three-dimensional form on the background of Bundy Tubing Co.'s space.

On display in the area—booths 446 and 448—will be various refrigeration tubing parts, such as serpentine condenser coils, compressor parts, and connecting lines.

P. A. O'Connell, sales manager; J. A. Dugan, refrigeration sales; W. F. Kendall, salesman; and A. F. Bernthal, product and technical control engineer, will represent the company.

17-Pound Condensing Unit Will Make Its Debut

Two new "Watsco" products, manufactured by Wagner Tool & Supply Corp., will be given their premier showings in booths 738-740.

One is the "Midgette," a complete condensing unit that weighs only 17 lbs. and measures only 7 in. by 11 in. by 9 in. This belt-driven unit is rated at 1/20 hp. and reportedly can be supplied to meet all electrical requirements from 6 to 220 volts. The unit will be seen operating a 1-cu. ft. refrigerator.

Also to be introduced is the "Magni-Chek" valve. This is described as a non-electric, magnetically-operated check valve featuring a floating disc solely controlled by pressure and magnetism, with springs and weights being eliminated. According to Wagner, this "enables the valve to be installed in any position without creating undesirable back pressure."

Another recent addition to the Watsco family that will be exhibited is the "Strain-O-Kap," a strainer and capillary combination.

The company also aims to attract attention with a demonstration of "Hep," a cleaning solvent that is claimed to wash away sludge and crust deposits that form on the internal mechanisms of refrigerating units. Free samples will be distributed as long as the supply lasts.

Thermometers Allay Customers' Doubts as to 'Temperature Keeping' Qualities of Open Cases



Customers in this self-serve market with packaged meats should have no mental reservations about how the meats are keeping, as a series of thermometers connected into the display compartment (note one on right of sign) permit customers to read the temperatures in the display compartment.

PORTLAND, Me.—A clever touch in the merchandising of self-service meats which has helped to increase sales tremendously is the use of small individual thermometers set along the top of a double row of self-service meat refrigerators in the George Shaw Market here.

Harold Durocher, manager of the market, found almost immediately when the store installed 80 ft. of self-service meat cases that many housewives where chary about buying meat in this way, because they did not believe that the open boxes would keep the meat properly refrigerated.

The meat department was actually losing volume because women did not trust the new method.

Durocher's answer to the problem was to place six small portable thermometers, of hairline accuracy, along the tops of the cases. From each thermometer, which resembles an electric clock, a wire runs through the center of each meat display, where a thermocouple registers the exact amount of refrigeration to a tenth of a degree.

"Women moving along the self-service cases cannot help noticing that the thermometers all register 32°," Durocher said, "which always immediately builds up confidence. While the thermometers were expensive, we feel that they quickly repaid their cost in dramatizing the effectiveness of this type of refrigeration."

Aluminum Co. To Show Oil Cooler, New-Type Motor

Aluminum Co. of America has reserved three booths (748, 750, and 752) for its exhibit, which will be highlighted by the display of an all-aluminum water and lubricating oil cooler.

This cooler, with a capacity of 43,640 B.T.U. per minute, is to be installed at the company's Point Comfort (Tex.) works after the exposition.

In addition, visitors will see a 1-hp., 2 or 3-phase, 1,800-r.p.m. electric motor for use in portable air conditioners. Some of the component parts of this motor are aluminum castings or wrought products. These will be shown separately with identifying alloy and heat treatment information and will include two end belts, motor frame, rotor, and a spun aluminum baffle or air guide.

Other customers' products will illustrate the use of aluminum in compressor bodies, pistons, piston rods, cast ventilator fans, evaporators

with brazed tubing, fasteners, and finishes.

Present will be E. W. Mason, head of Alcoa's development division, home appliance section; J. R. Willard, manager of the development division, New Kensington branch; F. R. Marshall, sales engineer; and representatives of the finishes section, Alcoa process development laboratories.

Penn Will 'Animate' Control Hookups

A large animated diagram panel illustrating various types of control applications has been designed by Penn Electric Switch Co.

Using this electrically-operated panel, Penn representatives—by means of selector switches—will illustrate typical refrigeration systems and will demonstrate simulated refrigeration operating cycles complete with pressure and temperature readings in parts of the system.

Also, the company will display its new Series 321 automatic hot gas defroster.



Sell a "TASTEMASTER" with every COOLER

FILTER-DECHLORINATORS

Banish CHLORINE TASTE RUST AND DIRT

Better tasting water for more cooler sales

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FILTRINE MANUFACTURING CO., BROOKLYN 5, NEW YORK

"Water Coolers and Filters for 40 Years"

ATLANTIC CITY

REMINDER...

Ranco is expecting you at the

REMA Show

BOOTHS 626 and 628



DON'T FORGET . . . you're cordially invited to meet the gang from Ranco at the Atlantic City ALL-INDUSTRY Show, November 14-15-16-17-18. We'll be looking for you in Booths 626 and 628 at the Auditorium.

And look for the new Ranco exact replacements which have been added to the wholesaler line—the most complete line of Replacement Controls ever supplied to the trade.

Ranco Inc.
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World's Largest Manufacturers of Refrigeration Controls

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MANUFACTURERS OF REFRIGERATED EQUIPMENT

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THE NEW **COLD-IN** LINE FOR 1950

6th ALL-INDUSTRY REFRIGERATION and AIR CONDITIONING EXPOSITION

ATLANTIC CITY-NOVEMBER 14-18, 1949

BOOTHS

713

711

COLDIN CABINET CO., INC.

2800 Webster Ave., New York 58, N. Y.

Starting Up the System

Instructions and Procedure for Refrigeration Systems —Testing, Charging and Starting Methods Outlined

By E. D. Lindsley, Service Engineer, Worthington Pump & Machinery Corp.

Moisture and dirt are the two most common "trouble makers" in refrigeration systems.

Dirt and water can accumulate in open refrigerant lines during the construction period. Therefore, since a manufacturer thoroughly cleans and dehydrates compressors, condensers, and cooler shells before shipment, care must be taken to see that they are kept clean and dry at the time of installation. The moisture in the air we breathe is too much for a refrigerant system.

Iced expansion valves or plugged strainers, copper plating of compressor valves, scoring of cylinders and bearings, scoring of shaft seal surfaces and the corrosion of finely polished bearings and valves can all be eliminated, most of the time, by keeping the system clean and dry.

Proper procedure and precaution during construction, testing, and starting a new refrigerant system is of the utmost importance. The following procedure has been developed with the principal purposes of standardization and improvement of technique to assure clean, dry refrigeration systems:

Soft copper tubing must be tightly sealed by flattening all ends after it is cut from a large roll. Hard copper pipe should be cleaned before used by standing each piece on end and tapping its sides, to remove any loose scale or dirt.

Cleaning of Piping

Rags soaked with carbon tetrachloride should then be drawn through each piece of pipe and the swabbing continued until a clean rag can be drawn through once without becoming dirty.

Cooler shells, heat exchangers, and discharge pulsation chambers, which have been shipped with open connections or not dehydrated, should be turned on their sides or ends and hammered to see that they are clean. This will cause any scale, dirt, or water, if any is present, to fall out of the shell openings.

Should any water run out of the shell openings, the shell should be specially dehydrated. Welding rings should be used on all welded steel or brazed joints in order to keep welding slag out of the pipe lines.

Testing the Condenser

The refrigerant discharge and liquid piping, the condenser and receiver should be tested with "Freon" to 150 to 235 lbs. gauge pressure, according to city codes. The refrigerant suction piping, compressor and evaporator should be tested at 125 lbs. gauge pressure. The above pressures are for "Freon." In ammonia, equipment should be tested high side 300 lbs., low side 125 lbs. gauge or according to city codes.

Test pressures should be obtained by charging dry CO₂ or nitrogen into the system. All joints should be initially tested with soap suds. A small quantity of "Freon" (approximately 5 lbs. weight for a 10-ton system) should then be charged into the system and tested with Halide leak detector for leaks at all joints, including compressor shaft seal.

The water side of the condenser and cooler should also be tested. Pressure in the system should be reduced to about 50 lbs. gauge so that "Freon" can be added to raise the pressure in the system to approximately 65 to 70 lbs. gauge. The CO₂ or nitrogen can be charged to raise the pressure to that necessary for the test.

The system should be considered tight when the test pressures are held for 24 hours without leaks, the effect of a change in ambient air temperatures being considered. It is important to note that the ambient

air temperatures around all parts of the refrigeration system must be 70° F. or above for proper dehydration.

The evacuation and vacuum test should be performed by the Erection Department. The erection foreman should be responsible for the proper evacuation and for turning in a report of the vacuum test to the office.

Drawing a Vacuum

A good vacuum pump should be used to evacuate the system. The system should be evacuated for about 48 hours, or until a vacuum of about 29.5 is reached. Always use a good vacuum pump; do not try to evacuate the system with the compressor, as it is not designed or intended for this purpose.

The service manager should be responsible for the proper charging and starting of the refrigeration system. The refrigerant should be charged through a dehydrator and special care must be taken to discharge all air from the charging line before starting to charge the refrigerant into the system.

The vacuum on the refrigeration system should not be broken with air, but with refrigerant. The complete refrigeration system should be thoroughly tested for leaks immediately after the system is charged and before it is put into operation.

A white cotton cloth should be inserted in the suction manifold strainer of the compressor before it is placed into operation. This sock should be left in for about 36 hours of operation and then removed. The liquid line strainer should be cleaned at this time, also.

Drain the Crankcase

After the compressor has run about a week, the crankcase should be drained and, if it is equipped with an inspection plate, it should be thoroughly cleaned and swabbed out with rags soaked in carbon tetrachloride. It should be recharged with new compressor oil taken from sealed cans.

The service mechanics should be on the job continuously during the first two days of operation, longer on larger jobs. The job should be thoroughly checked for leaks and for proper operation.

A drier should be installed in each system and, after a week's operation of the system, it should be bypassed, and used each time the system is opened or worked on. Also, the strainer should be cleaned each time the job is thoroughly checked.

Finishes Firm Develops New White Enamel

NEWARK, N. J.—A new white baking enamel "meeting most requirements" has been developed by Maas & Waldstein Co., manufacturer of lacquers and synthetic enamels.

The enamel was especially formulated to meet the needs of manufacturers of kitchen cabinets, household appliances, and many other types of products finished with white baking enamels, according to the company.

Known as CODUR Gloss White Baking Enamel KY-821, it is said to possess unusually good shock resistance and improved flexibility and to be "extremely versatile."

Gasket Corner Notcher Shapes to Door Edges

PORT JERVIS, N. Y.—A new radius-type gasket corner notcher, designed to meet the demand for a plier-type notcher to shape gaskets for round corners directly on refrigerated doors, has been added to the refrigeration line of the Techniflex Corp. here.

The new notcher cuts at a 12-degree angle and features an adjustable guide guaranteeing a notch of the desired depth. Similar in construction to the Techniflex 90-degree notcher, the light-weight, aluminum alloy pliers "are heat-treated to insure high tensile strength and are designed for each replacement of the tempered precision blades in the event of nicking," the company stated.

Varied Technical Program Is Presented To Indiana Service Engineers Assn.

By C. Dale Mericle

INDIANAPOLIS—Featuring eight educational talks, the second annual convention of the Hoosier State Association of the Refrigeration Service Engineers Society held at the Antlers hotel here Oct. 7, 8, and 9 was well attended.

The educational features of the meeting got under way Friday evening with three talks, which were followed by a "bull" session and get-acquainted party.

In discussing "Open Top Cases," the first speaker, John Spence, Hussmann's service manager, described the great advances these open cases are making, but he also cautioned servicemen that the greatly increased lighting employed in food store modernization programs is putting an additional load on refrigerating equipment.

Solution of moisture problems, particularly by proper location of driers, was discussed by Ken Newcum, president of Remco, in his talk Friday evening, while George Schuld, the RSES international safety director, cited accounts of accidents and mishaps in urging servicemen to use care in their everyday work.

FACTOR OF COMPRESSOR SPEED

Increasing speeds in modern compressors offer several advantages to the consumer without necessarily reducing the life of the equipment, the servicemen were told by J. L. Roth, national sales manager of General

Electric Co.'s open condensing units, in the first talk on Saturday's educational session.

"Life of equipment depends on how well it's designed for the speed at which it operates, not simply how fast or how slow it goes," he said.

Actual piston travel can be less in a high-speed machine with small pistons than in a larger, slower machine with bigger pistons and longer piston travel, he declared.

Increasing sales of hermetic units was revealed by George Eager, Servel service manager in his talk on "Testing and Servicing Hermetic Units."

WHAT PERCENTAGE HERMETICS

"During the first seven months of this year, Rema condensing unit manufacturers have reported that 68% of all units produced of 1/2-hp. and up were hermetics," Eager said. "Below 1/2-hp., probably 90% were hermetics. And more and more manufacturers are becoming hermetically minded."

Two speakers from Philco Corp.—Edward Hart, chief engineer, and Edwin Barth, national service manager for refrigerators, freezers, and air conditioners—wound up the morning session with a joint presentation that included a showing of a movie detailing steps in servicing 1949 model refrigerators.

"Although freezers have been designed so that they are ready to 'plug in and play,' the public is actually not ready for this in freezers,"

Hart said, making the point that "customers must be educated in their use."

"Sweating" of freezers was also touched upon by Hart, who explained that "50% of freezers go into basements and nothing you put in the basement comes out any good."

Electrical resistance heating elements have been used successfully in extreme conditions to overcome this problem, he indicated.

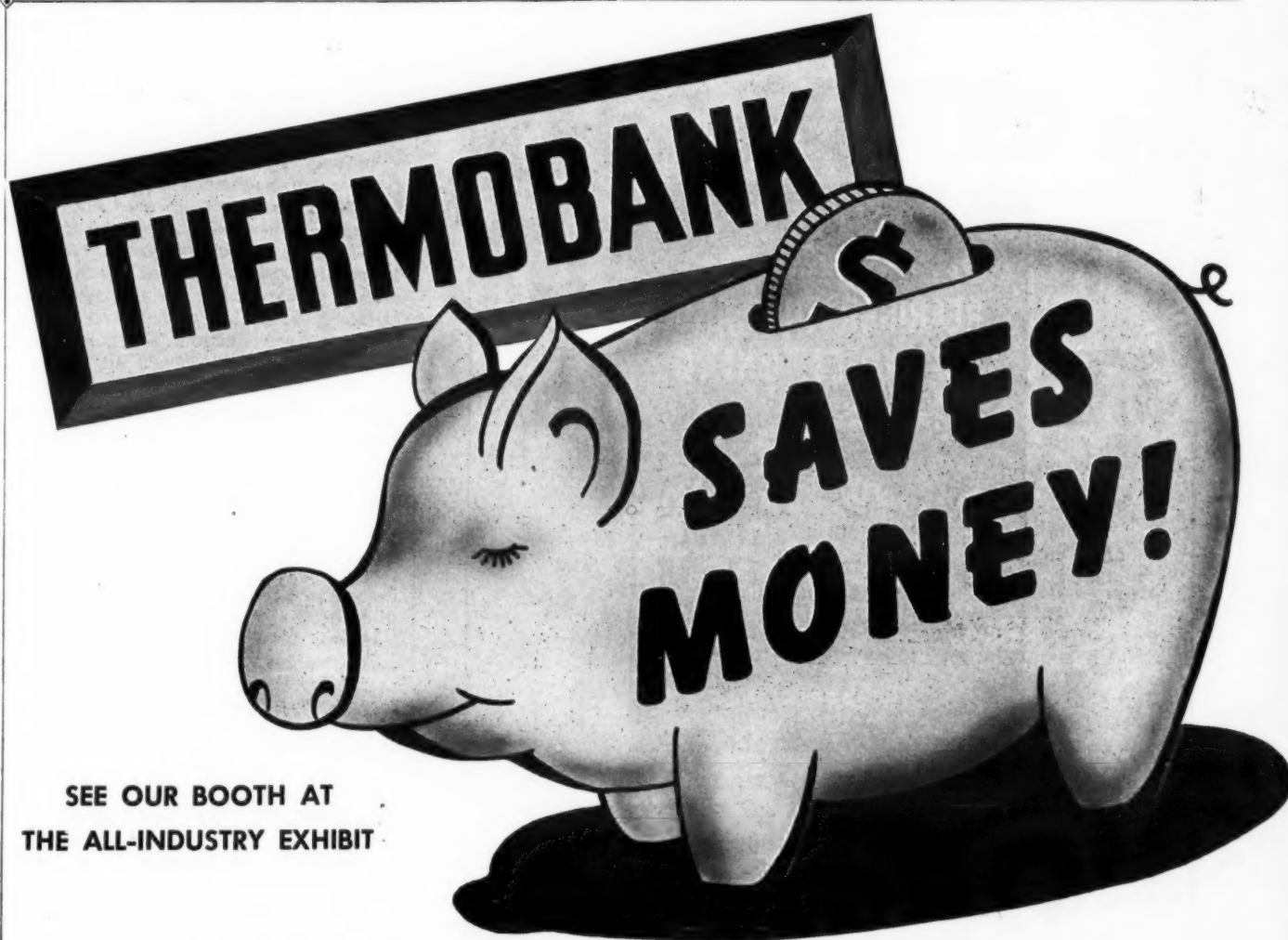
Characteristics of refrigeration oils were described by Dr. Walter O. Walker, director of research for Ansul Chemical Co., who also commented on the waxing problem that may be found in low temperature applications.

"The ordinary remedies to solve a waxing problem," he said, "are to use an oil with no wax or at least a very low wax separation temperature, and to use an oil separator which keeps the oil from reaching the expansion valve."

"If you have a machine that is plugged up with wax but you don't want to take the system all apart to remove the oil and wax, I'd suggest that you install a filter ahead of the expansion valve and pack the filter in dry ice for 24 hours. Most of the wax will collect in the filter, which can then be removed from the system."

Last speaker on the educational program was David Zipser, chief engineer of Bush Mfg. Co., who discussed the advantages and savings offered in water conservation by means of an evaporative condenser.

The Saturday afternoon session wound up with a dozen servicemen competing in a tube-bending contest staged by Imperial Brass under the direction of Mike Kitchell, Imperial representative.



SEE OUR BOOTH AT
THE ALL-INDUSTRY EXHIBIT

MORE CAPACITY—The capacity of an evaporator drops rather sharply when it is used at low temperature levels because of heavy frosting. The THERMOBANK evaporator is rated under actual low temperature operating conditions, guaranteeing full rated capacity on the job.

THERMOBANK SAVES MONEY!

NO EXTRA MAINTENANCE—THERMOBANK defrosts itself. Since the THERMOBANK is so infallibly automatic, eliminating electric heaters, brine and water sprays, it does away with extra maintenance labor.

THERMOBANK SAVES MONEY!

LESS OPERATING TIME—An ice-free evaporator gives more compressor capacity. This cuts sharply the operating time of the system and frequently permits the use of a smaller size compressor.

THERMOBANK SAVES MONEY!

NO SPOILAGE LOSS—Radical temperature changes in low temperature rooms cause serious dehydration. In the THERMOBANK the freezer temperature is practically constant. This eliminates deterioration and weight losses.

THERMOBANK SAVES MONEY!

Send for Catalog 16R-A

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THE STANDARD OF THE INDUSTRY!

KRAMER TRENTON CO. Trenton 5, N. J.

THERMOBANK - COOLMASTER - RADIAL UNITS - PANEL UNITS - CUBERS - FINNED COILS - BARE TUBE COILS - HEAT INTERCHANGERS - CONDENSERS Air Cooled, Water Cooled, Evaporative - WATER COOLING EVAPORATORS - BLAST COOLING COILS - BLAST HEATING COILS.

WANTED MANAGER OF PRODUCT SERVICE

Responsible for service after sale on heating and cooling products. Age 35 to 45 (approximately).

Salary \$7200 plus

Position at headquarters of large national manufacturer.

Requirements:

Engineering graduate with at least five years' experience.

Resume required prior to interview
Box 3321, Air Conditioning & Refrigeration News

Refrigeration Problems

and their Solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

How Salt and Ice Bunkers Were Used

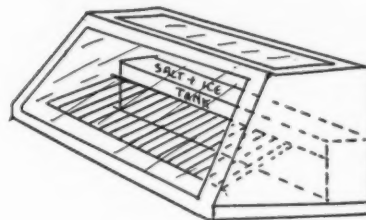


Fig. 3—Top display case with salt and ice bunker tank in rear of case.

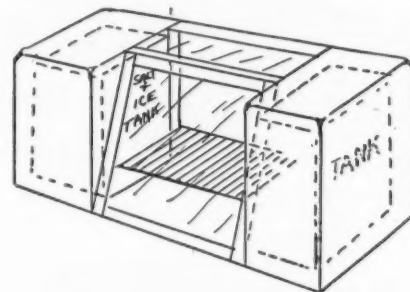


Fig. 4—'Freezer case' with salt and ice bunker tanks. One bunker up to 8 ft. Two bunkers up to 10, 12, and 14 ft.

Display Cases-- Closed & Open Types

Many of us can remember when fresh meats were sold only in the "butcher shop," where only meats and lard were sold. The butcher shop was usually a separate store which, except in some of the larger cities, had its own "slaughter house" just outside of town. The butcher bought and slaughtered his own cattle, hogs, sheep, and lambs. Few of them handled chickens, turkeys, butter, or eggs; these were handled by the "poultry houses."

THE BUTCHER SHOP

The butcher kept his meat in a walk-in cooler with overhead ice bunker and only brought out a quarter, a side, or a loin, and put it on the block when the customer asked for a round steak, a roast, or chops. He cut them off while the customer waited.

If it was in the summertime, the butcher would probably put the quarter or other piece from which he had

Early Models



Fig. 1—Ordinary single-glass counter showcase used for meats with ice.

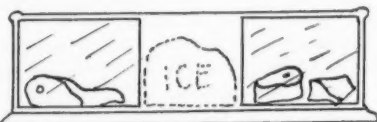


Fig. 2—Early counter case, one or two glass, with ice bunker in center.

cut, back in the cooler. Or if it was cool or cold weather, he may have hung the leg or side on a hook on a large wall rack or lay it on a marble-top counter. He purposely kept the store quite cool, with only enough heat to keep it above freezing, and customers kept on their overcoats and gloves.

Thus his display consisted of the

meat out in the open, either hung on the wall rack or flung on the counter, to be fingered by the customers, feasted on by flies, and open to passing germs.

THE SHOW CASE

The next step was to put some of his meat, especially the cuts, in a single-glass counter show case and put a couple of chunks of ice in with it. This kept the meat away from flies and dust and enabled the butcher to show some of his meat stock, even in warm weather. Temperatures in these show cases were not what we consider necessary for proper meat display today, but they were usually under 60° and therefore better than store temperatures.

Before long the show case makers started to build a case especially for the butcher. It had two glasses so as to increase the insulating value of the glass, and it had a separate compartment for the ice, with a drain to carry away the water.

From this crude, iced show case has come the long line of display cases and other refrigerated fixtures designed not only to keep the foods cold and in proper humidity conditions, but to display them so that the customer will buy more of the products displayed. It is a far cry from these early show cases, slightly adapted for ice, to our modern gleaming white open-type frozen food case, mechanically refrigerated, automatically controlled and lighted with its own system of fluorescent lights.

It was soon recognized that the temperatures carried by these converted show cases were not low enough. The walls were insulated, the glasses increased from two to three and sealed. Access doors were stripped to prevent air leakage. Ice bunkers were arranged to obtain better air circulation.

FREEZER CASES

Still, temperatures were not low enough for 24-hour storage; only for a few hours display. The cases were loaded from the cooler in the morning and the meats put back into the big cooler at night.

To get lower temperatures, the case was made still heavier, and larger bunkers were provided to be filled with cracked ice and salt. If this was done once or twice a day, case temperatures of just above freezing were obtainable. These cases were called "Freezer Cases."

Freezer cases enabled the grocer to put in a fresh meat department, for he could get cut, fresh meats in small quantities from "packing houses" and keep them very well in his freezer case. This marked the beginning of the modern merchandising of meats.

It was inevitable that the small commercial refrigerating machine that began to become popular just after World War I should be applied to the freezer cases. At first, coils were put in in place of the bunkers, but later, cases were developed especially for mechanical refrigeration.

MODERN REFRIGERATED FIXTURES

As Top Display, Full Vision, Combination Top Display and Bottom Storage or Double Duty, Delicatessen, Candy, Dairy, and other types of cases, they quickly and completely supplanted the iced case and proved their worth in causing the customer to buy more meat and other displayed products. The customer could see what she was buying; could point out the cut she chose.

We have gone through this little history to make clear the reasons for the development of the enclosed display case and more recently, the development of the Open-Type Refrigerated Display Case, which is the latest milestone in selling meats, dairy foods, fruits, and vegetables that must be kept under refrigeration constantly.

THE OPEN-TYPE CASE

The upper glass is taken off, the customers are free not only to see but to handle the foods, just as they were the meats on the marble-top counter in the old butcher shop.

But with two great differences!

(1) The foods are still kept cold, just as in the enclosed case. They are constantly blanketed by the cold air, for they are always kept below the top of that cold blanket.

(2) They are wrapped in transparent cellophane that protects them from dust and germs from the air, and from contamination from handling by the customers.

Naturally, there are some refrigeration problems involved when the top of the case is left off, so to speak. Actually, the essential problem is that the losses are very much greater, so a great deal more refrigeration must be supplied to offset those losses.

An enclosed 6-ft. top display case can be handled by a 1/4-hp. condensing unit and an evaporator coil to match. A 6-ft. open-type case will require a 1/2-hp. condensing unit and a coil to match it, that is, a larger coil and twice as much capacity as for the enclosed case.

There may be some question as to why the losses are so great. It may be said, "cold air is heavier than warm air, so it should lie in the case. How does so much heat get in?" It is true that cold air is heavier than warm air, so it will tend to stay in the case. But there is movement of the cold air. It is circulated through the coil; it has to be, otherwise it would not be cooled. So there must be constant circulation of the cold air through the coil, over the foods, and back to the coil.

Some makes of open-type cases use gravity circulation; others use forced convection (blower coil). The forced circulation is more positive, but there is no essential difference. The air is circulated in either type and the effect is the same.

INFILTRATION OF WARM, MOIST AIR

During this air circulation, the top of the cold air comes into contact with the warm air above the case and some of it is warmed. It, therefore, rises and leaves the case. Its place must be taken by other air, and the only place that air can come from is the outside air.

So warm, moist outside air is continually being drawn into the case. It must be cooled down to the cold air temperature, but more important, the moisture in it will be condensed out, down to the dewpoint temperature of the cold air in the case. To condense this vapor into water means removing approximately 1,000 B.t.u. for every pint of water condensed out.

If you have noticed the drain from an open-type case you will realize how many thousands of B.t.u. must be absorbed by the coil and the machine, just to condense the moisture out of the air that is drawn into the open case. Very little of the water going down the drain came from the foods; they are mostly wrapped, or in containers.

Moreover, even if there were no air movement, warm, moist outside air would "diffuse" into the cold,

dryer air in the case and would add to the refrigeration load to cool the air and condense the moisture.

THE BIG LATENT LOAD

So the big load of an open-type case is from the heat (the sensible heat of the air and the latent heat of the moisture) in the outside air that infiltrates into the case or is drawn in to replace case air that has been warmed and left the case.

It is therefore highly important to keep the cold air in the case. Some of it will inevitably get out, as above described, but the double-sized coil and machine can take care of this normal loss of cold air or rather, let us say, the normal gain of outside air. The case, the coil, the machine, and the fan, if any, are designed for this normal loss, even on 100° moist days. The manufacturer has to put in plenty of capacity to take care of a severe condition, such as a 100° sultry, moist day.

He must also allow for a normal amount of air movement in the air outside the case. Customers passing the case or reaching into and removing a package, cause air movements that greatly increase the mixing of the cold and warm air. This mixing means that at that time, much more warm, moist air is going into the case, adding heavily to the load.

To show this visually, blow some cigarette smoke in an open-type case, then walk by the case and reach into it a time or two. Watch the smoke roll out of the case, showing the cold air being lost and being replaced with warm moist air.

AVOID DRAFTS BY ALL MEANS

If you were to place an electric fan nearby, where it swept air over the case, even intermittently as an oscillating fan does, you would introduce so much warm, moist air that the case simply could not keep up with it.

This seems so simple and so obvious that it would be thought that even the user would recognize the need for keeping fan blasts from open-type cases, but that is one of the common causes of complaints of "not cold enough" with open-type cases. In fact, it is about the only cause of trouble peculiar to open-type cases only.

The air movement doesn't necessarily have to come from a cooling fan. It may come from the fan of a unit heater. Several instances have occurred in which the excessive air movement came from an evaporative cooler (desert cooler). A draft between open front and back doors of the store can cause excessive loss from the case.

Even a door that is near the case and that is "fanned" due to heavy use, can cause excessive loss of cold air from the open-type case. The air movement does not have to be enough that a person will feel it as a strong draft, yet it may be enough to keep

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Today's Refrigerated Display Case

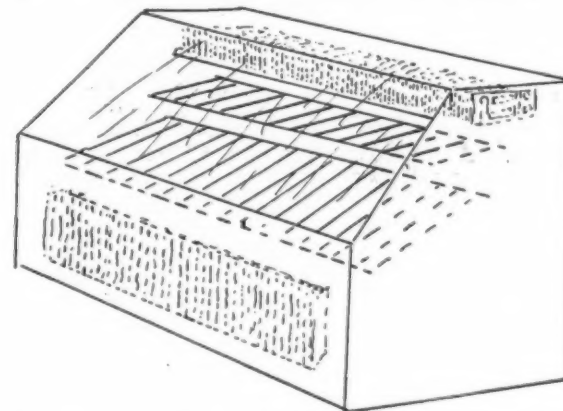


Fig. 5—Schematic drawing of typical modern combination top display and bottom storage mechanically refrigerated closed case.



- See the interesting booths!
- Stroll the world's finest boardwalk!
- Dance to name bands!
- Visit famed cafes!
- Enjoy refreshing sea breezes!

VIRGINIA
Smelting Company

WEST NORFOLK • NEW YORK • BOSTON • DETROIT

Manufacturers "Virginia" Refrigerants

Distributors Kinetic's "Freon" Refrigerants

Distributors Presstite Products

SEE US AT BOOTHS 556-558

Route of Cold Air on Open-Type Case

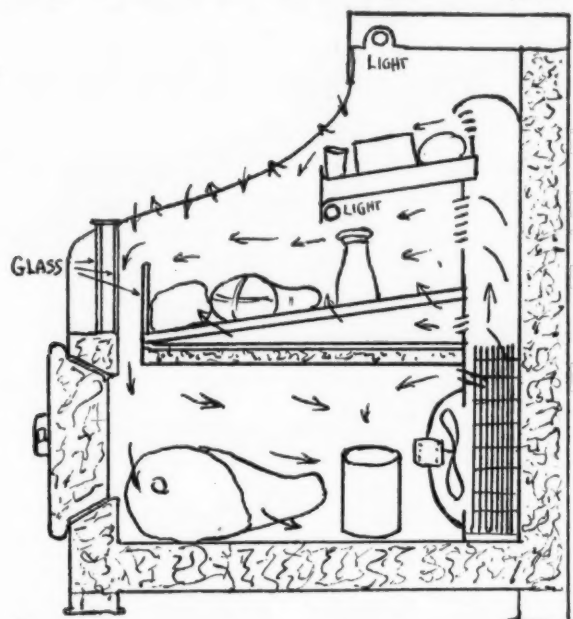


Fig. 6—Cross-sectional schematic diagram of typical forced convection open-type mechanically refrigerated meat or dairy products case.

Display Cases--Closed and Open Types

(Concluded from preceding page)

the case from holding temperature, even with the machine running continuously.

FULLY ACTIVE COIL IMPORTANT

Of course there are other things that can go wrong with an open-type case, but they are the same things that happen to enclosed cases: overloaded with too much warm food, located in direct sun or near a stove or other heat source; or such mechanical troubles as low on charge, moisture in the system, incorrect setting of the control, improper action of the expansion valve, obstruction to good air circulation inside the case, coil not fully active, coil excessively frosted, etc.

With open-type cases it is especially necessary that the coil be kept fully active, so it is advisable to use a generously-sized heat exchanger in the liquid and suction line. Then feed the expansion valve (reduce its superheat) until the body of the heat exchanger is cold, the first part of it from the coil, frosted even.

With this valve setting, the average suction pressure (after the machine has been running five minutes or so) will probably be from 22 to 25 p.s.i.g. for "Freon-12" or 15 to 18 p.s.i.g. for methyl chloride, corresponding to evaporator temperatures of about 22° to 25° F. The average suction pressure will vary with the different makes of cases according to how heavily the case is coiled, the capacity of the condensing unit, the temperature of the case itself at the time, etc.

If the average suction pressure is 20 p.s.i.g. "Freon" (14 p.s.i.g. methyl chloride) or below, the valve is not feeding heavily enough or something else is wrong, for these pressures correspond to evaporator temperatures below 20° F.; and the machine capacity and the ability of the case to hold temperature, will fall off heavily at evaporator temperatures below 20° F.

FULL DEFROST NECESSARY

With the open-type case, it is very necessary that the coil be kept clean and as free of frost as possible. Of course, this is true of any finned coil, but the coil of the open-type case is often hidden, and it is not easy to tell whether it is frosted or not; so the service engineer must make certain that the coil does not build ice or frost, which not only insulates and reduces the capacity of the coil, but also blocks air circulation.

In normal operation, it is possible to get complete defrosting between cycles by setting the cut-in of the control so that the machine starts at a suction pressure of 35 or 36 p.s.i.g. for blower-type coils or 38 to 39 p.s.i.g. for gravity coils.

In hot weather, and if the case is heavily loaded and used out of heavily, higher cut-in settings may be required in order to obtain complete defrost between runs. This will result in wider fluctuations of case temperatures due to the wider differential of the evaporator temperature.

On installations that are heavily loaded in this manner, it may be advisable to use a defrost timer set to cut the machine off from about 2 or 3 hours in the early hours of the morning, but cut it back on again about an hour before the store

opens, so that it will have time to cool down after the defrost.

FROZEN FOOD OPEN-TYPE CASES

Successful merchandising of frozen foods including package ice cream, requires that they be openly displayed, preferably in an open-type case, so that the customer may make her own choice. The open-type case is, therefore, ideal for this purpose, but quite obviously adds some problems to the open-type case.

First, because of the low temperature that must be maintained (0° F. or below) the temperature difference between the cold air in the case and the warm air in the room is greatly increased—about doubled on an average; so the heat gain from the warm air is greatly increased. The body of the case is more heavily insulated, so "heat leakage" may be kept the same as for the higher temperature open-type case for fresh meats, vegetables, etc.

The air movement and infiltration of warm, moist air into the case are faster, and the heat gain greater. This calls for a larger machine—for a 6 or 7-ft. frozen food open-type case, about a ¼-hp. low-temperature unit. It is important that the unit be the type whose compressor displacement and motor loading are based on an evaporator temperature of 0°; not the medium temperature type based on a 25° evaporator.

Most open-type low-temperature cases use plate coils set about a foot apart across the case, and the packages of frozen food are stored between the plates.

COLD AIR BLANKET

Air infiltration penetrates at least two or three inches of the cold air, so the top two or three-inch layer of air just below the top edge of the plates will be too warm to successfully keep frozen foods. Therefore, packages of frozen food should not be stacked higher than a point about 3 or 4 inches below the top edge of the plates, otherwise they may thaw a bit and be wet and not pleasing to the customer. Instructions that go with such cases tell the grocer not to load these cases above a line about three inches below the top edge of the plates.

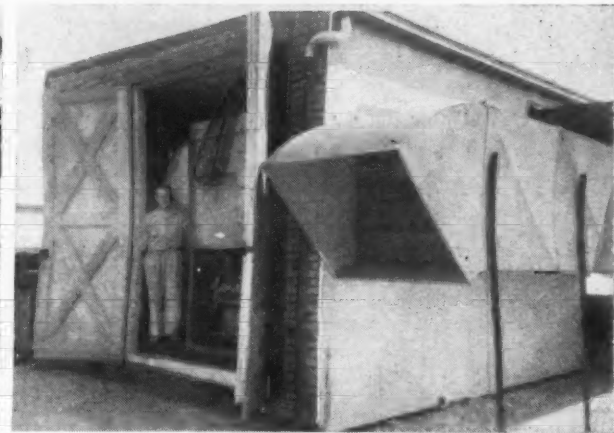
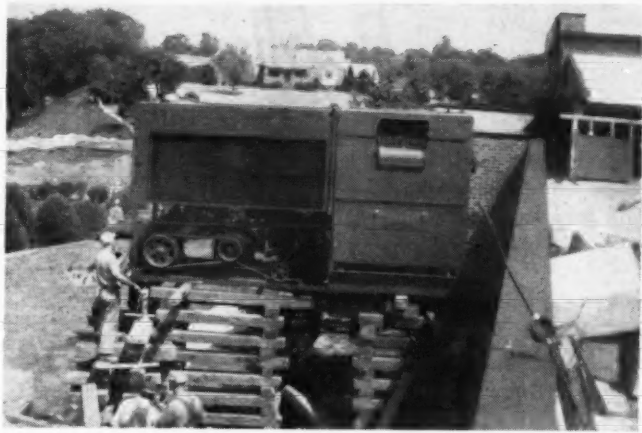
Some types of cases have some additional means of flowing a blanket of cold air two or three inches deep over the top of the plates, thus allowing the merchant to load packages clear up to the top edge of the plates. This is sometimes done by forced air from a fan, sometimes by an auxiliary coil in a structure above the case or by an extra plate placed lengthwise of the case but above the top edge of the plates.

Whatever the method, a blanket of cold air at least two or three inches thick must separate the frozen food and the warm, moist air above the food.

GENERAL PRECAUTIONS

Frozen food open type cases are even more sensitive to room air movement than the higher temperature, open type case, so fans, unit heaters, evaporative coolers, or other sources of drafts—even attic fans, may so disturb the overlying blanket of cold air in the case that proper temperatures cannot be maintained even with continuous machine operation.

No Room Inside, Central System Installed on Roof



LEFT: Engineers and workers raising the Governair unit to the roof. RIGHT: The 40-ton Governair system in the country club's "penthouse."

The plates are not defrosted. As frost gathers on them, they must be scraped or brushed down to remove the frost. Some designs have auxiliary coils that may be defrosted.

Obviously, fully active plates or other low temperature evaporator, are absolutely necessary, and heat exchangers are highly recommended. An average suction pressure of about 0 to 2 p.s.i.g. for "Freon-12" can be expected. If they are lower, the cause should be investigated.

Other precautions should be taken the same as for ice cream cabinets, conventional home freezers, locker plants, and other low temperature installations. Moisture in the system must be particularly avoided; a generous size dehydrator should be used, placed in the liquid line inside the case.

A LATE TYPE

Undoubtedly, the open type case is not only here to stay but is becoming increasingly popular. Its value in merchandising refrigerated products has been so well demonstrated that it is replacing the enclosed type case in many applications.

A recent innovation in the open case is one with no superstructure. Placed away from the wall, it can be loaded from the rear yet accessible to the shopper. Placed as a counter between the butcher and the customer, it permits her to select from the case and also buy special cuts from the butcher, and it allows him to keep the case arranged and to replace cuts taken out by customers.

Illinois RSES Sees How Thermo-Grip Pliers Do Fast Soldering Job

ROCKFORD, Ill.—"By concentrating the heat where you want it, Thermo-Grip soldering pliers will heat copper tubing quickly for rapid soldering jobs," declared K. W. Zartler, Chicago district sales manager for Ideal Industries, in presenting a short demonstration of the device before the Illinois State RSES association at its convention here.

For his demonstration Zartler had plugged in the company's standard power unit which converts 110 or 220-volt current into a low voltage high amperage current, which is then supplied to the resistance heating elements which form the jaws of the pliers.

Although intended primarily for production-line soldering, brazing, or light welding, the Thermo-Grip pliers can be successfully employed in many service operations also, he indicated.

"Four sizes of the pliers are being offered, but we would recommend that the medium or heavy-duty models be used for soldering copper tube in refrigeration work," he declared.

With a 1,000-watt model, ¼-in. copper tube can be heated in 1¼ seconds to a temperature suitable for soft solder, while ½-in. tube would require only 22 seconds for soft solder to flow, according to Zartler.

For ⅝-in. tubing, brazing temperatures of 1,300° F. are obtainable in 33 seconds, while the same temperatures can be achieved on ⅝-in. copper tube in 2 minutes, 15 seconds, he said.

"Because there is no flame, there is no fire hazard, and a person can't get hurt electrically," he declared, demonstrating the latter by placing a finger (his own) between the jaws of the pliers with the current turned on.

40-Ton Unit Air Cools Kentucky Country Club

NEWPORT, KY.—The beautiful Beverly Hills Country Club here, had an air conditioning problem. The management wanted to conserve all of the floor area and yet provide proper air conditioning with a large, powerful unit which the building demanded.

The solution was provided by General Air Conditioning Corp., Governair distributor for greater Cincinnati, which installed a complete 40-ton Governair packaged central station unit on the roof of the club.

General Air Conditioning's owner, Ludwig Jensen, reports that ideal

conditions are obtained from this roof installation, and its output was especially noticed in the large Trianon Room where over 700 guests were accommodated in cool comfort.

Hardwares To Handle Some M-H Residential Control Devices

CHICAGO—Four of the Minneapolis-Honeywell Regulator Co.'s newer and less complicated residential regulating devices will be sold through hardware stores.

These items, which can be installed by the home owner, include the company's plug-in "Chronotherm"; a plug-in heat regulator; a "power pile" for use in natural gas areas; and the "time-o-switch."

KEEP POSTED on RELATIVE HUMIDITY and TEMPERATURE

Only genuinely accurate information will do when you are dealing with these important factors.



This new and indispensable instrument for heating and air conditioning installations and service work is built by the manufacturer of the world's finest meteorological devices—suppliers to the United States Weather Bureau for over 70 years. Its accuracy is unchallenged—and the data it produces can be relied upon to give you exactly the facts you need. Remember, whatever your needs for humidity and temperature data, or wherever you need to collect them, Bendix-Friez makes the best instruments for the purpose.

BENDIX-FRIEZ

Portable Humidity and Temperature Recorder, Model 160—

3" x 5" charts, 8 or 30 hour records. Modern design . . . handy for small space and difficult locations . . . built to meet unusual conditions.



FRIEZ INSTRUMENT DIVISION of
1320 Taylor Avenue
Baltimore 4, Maryland



Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

Tropical Rarity Built of Tubing



On hand to grace the "Snow Ball" recently held in Manila was this sextet of lovelies. Third from left is Vicky Quirino, daughter of Philippine President Elpidio Quirino. Only a good refrigerating system kept the "snow man" from melting.

Air Cooled System Frosts Up Real 'Snow Man' Made by Philippine Commercial Firm

MANILA, P. I.—What is so rare as a snow man in tropical Manila—and a mechanically refrigerated snow man at that!

When the American community here decided to hold a Snow Ball last month as a benefit to equip a children's ward at Quezon Institute, the decorations committee got an unexpected assist.

Miguel G. Yatco and Luis H. Alvina, manager and assistant manager of the Mechanical and Electrical Exchange, local purveyors of refrigeration and air conditioning equipment, volunteered to make and set up free of charge for the occasion a mechanically refrigerated snowman, said to be the first seen in the city.

The committee accepted and found that the snow man brought them considerable publicity in the local press and was the center of attraction at the ball.

Yatco explained that the snow man consisted of a 7-ft. high and 3-ft. round shell of 1/2-in. copper. An inner shell was used to reduce the

brine volume and this enclosed 3/4-in. copper tubing. A circulating pump below the figure pumped brine upward toward the head and kept the brine solution in circulation.

A 3/4-hp. air cooled condensing unit was used.

"When enough frost is accumulated, the body can be exposed indefinitely without thawing," Yatco declared.

Pieces of charred wood were used to form the eyes, nose, mouth, and buttons on the snow man. A stove pipe black hat bearing the red double cross symbol of the Philippine Tuberculosis Society was propped on his head. A red woolen scarf was wrapped around his neck.

Over his wrist, the snow man jauntily carried his traditional black umbrella.

News of Manila's first snow man spread rapidly especially among the small fry. In response to numerous requests, an hour was set aside on the afternoon of the ball when parents could bring their children.

Locker Plants Should Advertise More To Sell Public on Savings, FFLI Speaker Declares

By C. Dale Mericle

CHICAGO—Selection of Al Todoroff, editor of *Locker Management*, as executive secretary of the Frozen Foods Locker Institute to succeed Ray Farquhar, retired, was announced by FFLI at a special meeting of directors and exhibitors following the exposition at the Sherman hotel here Oct. 3 to 6.

The appointment will involve shifting of the association's headquarters from Omaha, Neb. to the St. Louis offices of the publication.

This may also in some ways augment FFLI hopes for a strong national advertising and promotion program that will require the participation of some 3,000 locker plants.

LOCKER PLANT—WHAT'S THAT?

"I don't think any other industry has grown so rapidly with so little advertising," contends Farquhar. "So many operators, after opening their plants, seem to want to keep it a secret. There are still millions of people in this country who don't know what a locker plant is."

"Strong local newspaper advertising would be the chief answer for the frozen food locker plant operator who wants to increase his business," declared Perry Thomas of Beaumont & Hohman, Inc., advertising agency in outlining a promotion program now being considered by FFLI.

Figures to show what national advertising can do for a company or an industry were also cited by Guy Davis, vice president of the agency, during a general session of the FFLI at its Chicago convention.

ADS TRIPLED BUSINESS

Fifty-five concerns who slashed \$20,000,000 off their combined advertising expenditures lost an estimated \$925,000,000 in sales, he said, while 40 other companies who increased their advertising over the same three-year period "had enough sales gain to treble their original expenditures."

"These days of slowed down business activity in the locker industry should be days of increased promotion," Thomas declared. "We also feel that your present customers should be retained, and it's not wasteful advertising to resell your business to your present customers."

"The patron who reads your advertisements describing the advantages of renting a locker is assured that he is doing the right thing in keeping his."

"Newspaper advertising is the foundation of your promotion. It is flexible and inexpensive," Thomas said.

'NUTRITION STORY' SELLS

Besides promoting the services offered by his plant, the locker operator should also stress the story of savings and that of nutrition in his advertising, Thomas suggested.

Newspaper advertisements should appear at least 26 times a year, he said, adding that it could be supplemented with radio "spots."

"But before you take on radio advertising check the fellow businessmen in your town to see if radio advertising hits the people you want to reach," he advised.

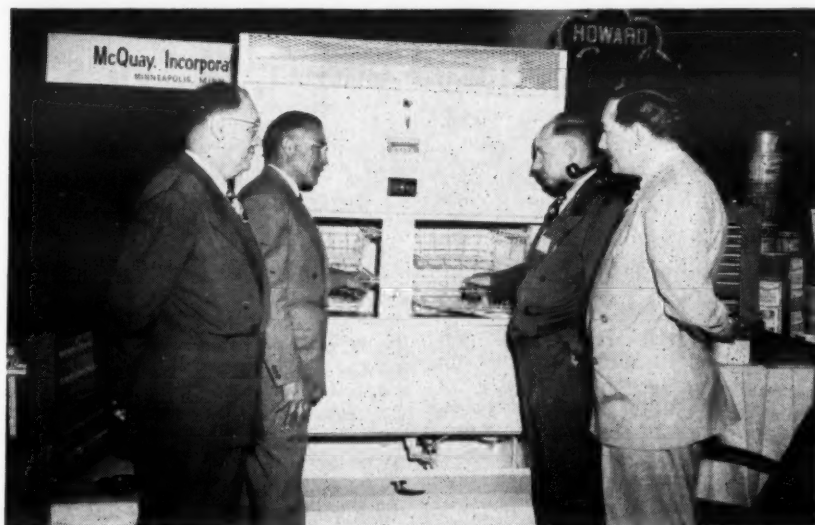
In connection with the annual FFLI convention, exhibits were sponsored by nearly 40 firms, including several producers and suppliers and refrigeration and related equipment.

Amana Society's Refrigeration division, for example, featured its new double-door "freezer-refrigerator" in addition to conventional home and farm freezers. Top freezer section, which Amana says will hold 70 lbs.

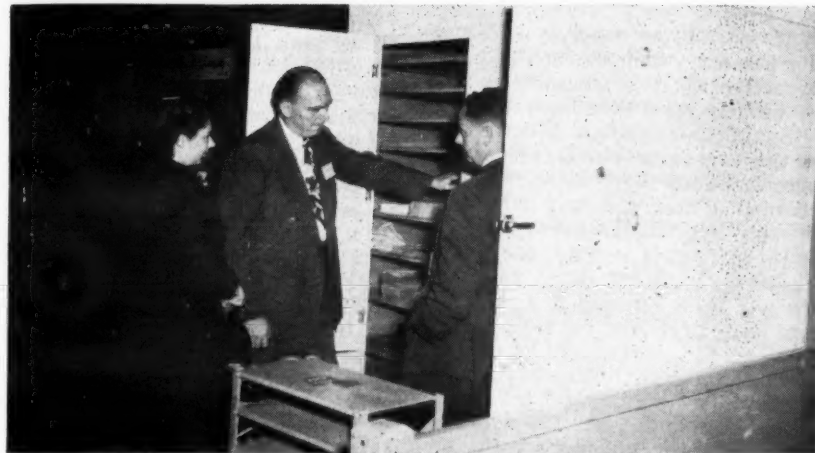
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Jack Smith of Frigidaire (left) explains to "Miss Eastern States" (Ruth McFarland) details of model locker plant while Ray Farquhar (right) does same for "Miss Western States."



Looking over McQuay's recently introduced "low-boy XL2 Zeropak" designed primarily for sectional cooler installation are Geo. R. Klahn of McQuay, Prof. David L. Mackintosh of Kansas State college, R. W. Schreiber and D. Ted Stikeleather of McQuay.



Discussing the Dole duplex blast plate freezer with H. W. DeBaugh (center) of Dole are locker operators Mr. and Mrs. R. W. King.



These visitors at the Auto-Lite exhibit were so interested in the instruments on display that they ignored the camera. At the extreme right is L. B. Murphy of Auto-Lite.



The new board of directors and officers chosen by the FFLI includes (seated left to right) Howard Ullery, Sidney Scobell, president, Ralph Hood, and Guy Deane, all locker operators. Standing are Perry Phillips, Bryce Vollmer, Carl Franzen, E. E. Jackson, vice president, and J. A. Smith, retiring president. Not present for the picture were Ray Farquhar, treasurer, and directors Archie Limon, Stanley Smith, and C. W. Freze.



Frozen Food Merchandiser With Eye Appeal because you can see the display.

Self Service Meat Case. Can be stocked from front or back. Single or continuous display.



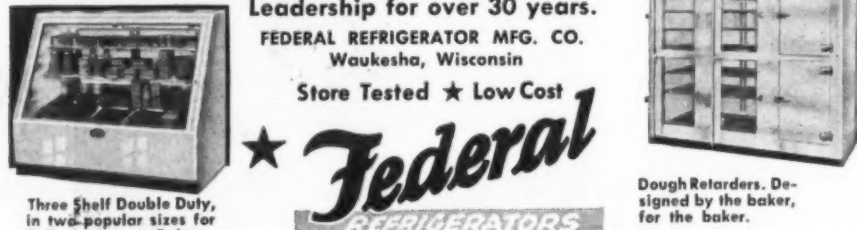
Triplo Deck Merchandiser. All three decks refrigerated.

Double Deck with Double Duty Storage. The all purpose case for Self Service.



Walk-in Storage and Self Service Combination. With sliding door display front.

All Steel Clad Walk-in Storage. All sizes and types.



Three Shelf Double Duty, in two popular sizes for Delicatessen or Bakery.

Dough Retarders. Designed by the baker, for the baker.

For
**COMPLETENESS
OF LINE**

Federal "Quality Built" Peak of Refrigeration Protection for Foods • Refrigeration Leadership for over 30 years.
FEDERAL REFRIGERATOR MFG. CO.
Waukesha, Wisconsin

Store Tested ★ Low Cost

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GENTLEMEN: Please send further information on line of

☐ FROZEN FOOD CASE

☐ WALK-IN COOLERS

☐ DISPLAY CASES

Name.....

Title.....

Address.....

Firm Name.....

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Zone.....

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ORIGINAL
FROSTY
Reg. U. S. Pat. Off.

Announces a

**New Price Structure
ON LOCKERS**

Applying to major distributors

Write, wire or phone

FROSTY FOODS EQUIPMENT CO.

305 BENSON BLDG.

SIOUX CITY 15, IOWA

'Reselling' Present Patrons on Continued Locker Usage Lays Groundwork for Future

(Concluded from preceding page)
of frozen foods, has its own door, temperature control, and interior light. Adjustable shelf arrangement, improved hardware, and strong door are features claimed for the normal temperature compartment.

Freezers were displayed by four other manufacturers, also.

Carrier Corp.'s display was built around the 15-cu. ft. upright freezer, which the company introduced earlier this year. This model, designated as 14C5, is of the single door type with 5 in. of insulation except for the door and top were 6 in. are used. Model shown is rated by Carrier as having a storage capacity of 500 to 600 lbs. of frozen foods.

Freezers of various sizes were in the booth occupied by Crosley Div. of Avco.

Philco Corp. showed the AV-75 upright freezer and a conventional chest-type model.

An 8-cu. ft. home freezer was also on display in the Frigidaire exhibit along with numerous other items including the 1/2-hp. Meter-Miser, a self-serve frozen food dispensing cabinet, three condensing units, a two-door reach-in refrigerator, a two-door household refrigerator (Model IL-100) providing 1 1/2 cu. ft. of low temperature storage and 8 1/2 cu. ft. of normal storage, two forced-air blower units, a locker plant model



George Foerstner of Amana tells Larry Warner, contractor, some of the features of Amana's new two-door freezer-refrigerator.

employed for training salesmen, a cut-away operating drinking water cooler, and an evaporative condenser.

The latter is equipped with a modulating water valve controlled by head pressure of condensing unit. Operation of the valve is such that in extremely hot weather full water flow capacity is permitted while in cold weather little or no water is used, Frigidaire claims.

Refrigeration compressors were also shown by Frick Co., which fea-

tured a large ammonia machine, and by Baker Refrigeration Corp., which displayed both a "Freon-12" and an ammonia unit, in addition to a model of the "Kold-Cell" warm room locker.

Low side equipment was displayed by Dole Refrigerating Co. and McQuay, Inc.

The latter featured its new XLB-2 Zeropak "low boy" freezer-blower for locker plants. The new model has been introduced to meet low ceiling requirements found in some locker plant installations and in many sectional coolers. Except for the height, which has been cut from approximately 94 in. to 72 1/2 in. by reducing the amount of basket freezing space, this model is identical with standard models. Until recently this has been available from McQuay only on special order.

In the Dole booth the spotlight was on the company's Duplex blast plate freezer for locker plants, but also shown was the hot-gas defrost bank of plates for ceiling installation and a rack of standard Dole vacuum plates.

Other refrigeration items featured at the exhibit by means of pictures only included the self-contained locker system of Iceberg Lockers, Inc., and the Amerio plate freezer distributed by the Albright Co.

Conventional lockers were on display in the booths of Knickerbocker Stamping Co. and Master Mfg. Co., while the Midwest Metal Stamping Co., was featuring its "File-Away" storage system which consists of wire baskets which slide into a rack. This system is claimed to provide more revenue per cubic foot of locker room space.

Other exhibitors included the Pacific Lumber Co. promoting insulation,

Electric Auto-Lite Co. with a display of temperature indicating and recording devices, and Philips & Co.

Philips has just developed an "eye glass defogger" so that patrons coming out of a locker room with their arms loaded with packages merely have to step on a foot switch and stand before a blower which forces warm air on their glasses. It is claimed to "defog" the glass in 10 to 15 seconds.

Electrification Meeting Opens In Chicago Soon

CHICAGO—The fourth annual National Farm Electrification Conference will be held in Chicago's Stevens hotel on Wednesday and Thursday, Dec. 21 and 22, it was announced recently by H. P. Rusk, chairman.

The conference will be conducted concurrently with the closing sessions of the winter meeting of the American Society of Agricultural Engineers and will follow immediately after the close of the Society's Rural Electrification Section sessions.

As in the past years, the conference is expected to draw approximately 400 farm electrification leaders. Delegates include educators from the country's colleges of agriculture, representatives of private and public power, industrialists, farm organization leaders, U. S. Department of Agriculture officials, and merchandisers in wholesale and retail fields. Top administrators in each category will appear on the program.

The conference is composed of 32 national organizations.

Tourist Trade Rises

Drugstore Concentrates Cooling System on Heat-Producing Areas

PANAMA CITY, Fla.—Installing a 25-ton air conditioning system, with special "booster equipment" for cooling such heat-producing areas as the fountain restaurant, grill, and snack-bar, has brought about a 100% increase in summer sales volume for Child's, huge downtown drugstore here.

The long-established store was completely modernized recently, incorporating 29 separate department, executive officers, and new fountain-luncheonette with a 22-stool fountain rail.

"Air conditioning is essential with us," declared A. G. Harlan, head of the store, "due to the fact that we cater to large volumes of tourists during the summer season, who find little relief from the heat otherwise."

The 25-ton York system is installed in the basement, with three plenum chambers, scattered through the store, which deliver 2,700 to 3,500 c.f.m. of cooled air. Thirty-five hundred cubic feet per minute are delivered over the fountain-luncheonette area, with a booster fan exhausting hot air from electrical equipment.

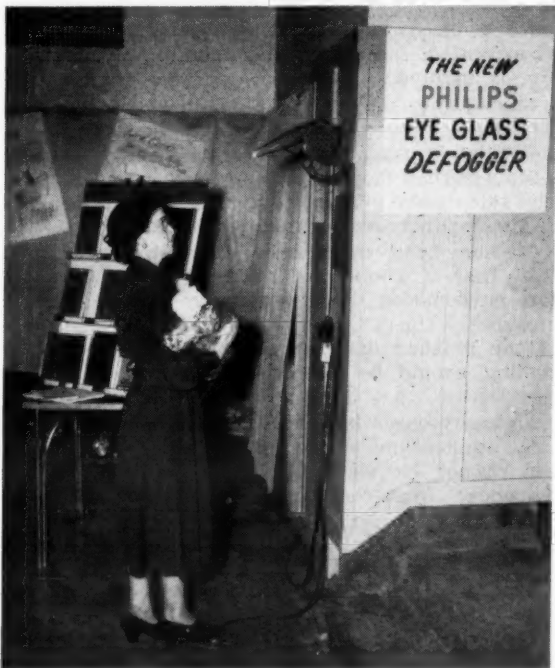
The remote-control system, incidentally, is the first air conditioning installation in northwestern Florida which does not depend upon package units, according to Harlan. The installation was made by Albert Lewin Co., local York dealer.

The Ladies Take Part In Institute Show



"Miss Western States" tries on a coat designed for use of locker patrons at the C. Schmidt Co. booth with the aid of (left to right) E. Buckman, Alvin E. Schmidt, and H. W. Wilson.

The new Philips eye glass defogger, introduced at the show by Philips & Co., directs a stream of warm air on locker patrons' eye glasses after they come out of the locker room, usually with both arms full of packages as Mrs. E. E. Jackson demonstrates. The glasses are defogged in 10 to 15 seconds by the blower, which is controlled by a foot-switch.



Bryce Vollmar of Master Mfg. Co. gives "Miss Western States" the once-over, to the amusement of R. A. Baxter and Kenneth Carney, locker operators.

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Carbonators

Complete Understanding of Their Operating Principles Will Help Refrigeration Men Make Proper Applications

By J. W. Archibald,
Temprite Products Corp.

It has been generally accepted that the effervescence created through the process of carbonation of a beverage greatly enhances its palatability. The magnitude of the Beverage Industry is indicative of the ever growing demand for soft drinks.

In former times it was deemed necessary to produce soft drinks in central packaging establishments, wherein large attended equipment would make it possible to control the degree of carbonation, and the mixture of carbonated water and syrup could be consistently maintained.

The bottling plant will continue to supply the demand for bottled beverages to such places where the economics of transportation and the disposition of bottles are not important factors. In many locations however, it is found more practical to produce a carbonated beverage automatically and at the instant it is required.

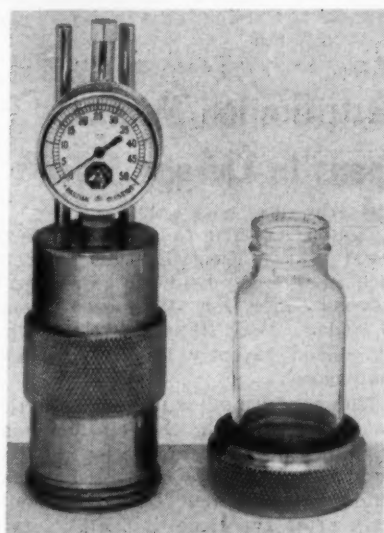


Fig. 1—CO₂ Volume Tester.

To fulfill this requirement, several equipment manufacturers have made available combined cooling and carbonating units, suitable for connection to city water supply, wherein the process of carbonation takes place automatically and instantaneously. The opening of the faucet sets the process in operation.

With the advent of Instantaneous Carbonators to the soft drink dispensing field, considerable interest has been shown by refrigeration engineers, in their operating principles and applications. Since the major aspect of the process is refrigeration, this interest is well justified.

The successful operation of a manufactured product, depends to a great measure, on the familiarity of the installer with its operational factors and his adherence to the application instruction of its producer. With this as his objective, the writer hopes to convey the operating principles and applications of the small unit carbonator.

CARBONATION is the process of uniting carbon dioxide gas with water. Since these components have a natural affinity for each other their union is readily accomplished. Diffusion of CO₂ gas through water will result in its carbonation.

DEGREE OF CARBONATION: The degree to which water can be carbonated is dependent on certain physical conditions of temperature, pressure and the effectiveness of water atomization.

The outstanding performance features to be found in the modern small unit carbonator, result from the fact that this breaking down of the water has been effectually carried out.

The degree in carbonation is measured in VOLUMES and is that amount by volume, of CO₂ gas held in suspension in the water.

Water having four cubic feet of CO₂ gas suspended in one cubic foot of water, is said to be carbonated to 4 Volumes.

A simple testing instrument, known as a CO₂ Volume Tester, Fig. 1, is available to determine the ratio of CO₂ gas to water in a test sample of carbonated water and comprises a chamber into which is drawn the sample to be tested.

On being sealed and subjected to a pressure gauge and thermometer, the instrument is shaken to liberate the CO₂ gas, the pressure of which is indicated on the gauge. Simultaneously the temperature is read and the two applied to a CO₂ volume chart, Fig. 2, where Volumes of Carbonation are indicated.

The major components of a modern design instantaneous carbonator are as follows:

1. Stainless Steel Shell: Stainless steel is impervious to the chemical reaction of carbonated water and is the most acceptable metal for the purpose.

2. Check Valve CO₂ Gas Line: Prevents water from backing up into CO₂ gas supply when gas tank becomes empty.

3. Check Valve Water Inlet and Spray Nozzle: Prevents the backing up of carbonated water on the off-cycle of the water pump.

4. Spray Nozzle: Permits water to enter the carbonator on the running cycle of the water pump, atomizing the water for more effective absorption of CO₂ gas.

5. Electrode High Water Level: Actuates liquid level relay to stop pump operation.

6. Electrode Low Water Level: Actuates liquid level relay to start pump operation.

7. Baffle: Provides separation for carbonated water outlet.

8. Tube: Carbonated water outlet taken from undisturbed area in bottom.

LIQUID LEVEL CONTROL RELAY: Fig. 3 is an electrically operated relay actuated by the electrodes in the carbonator. Depending for its operation on the electrical conductivity of the water.

Circuit is established through an induction coil, having no physical electrical continuity with the power supply. Induced current circuit causes contact to be made to the water pump motor when water in

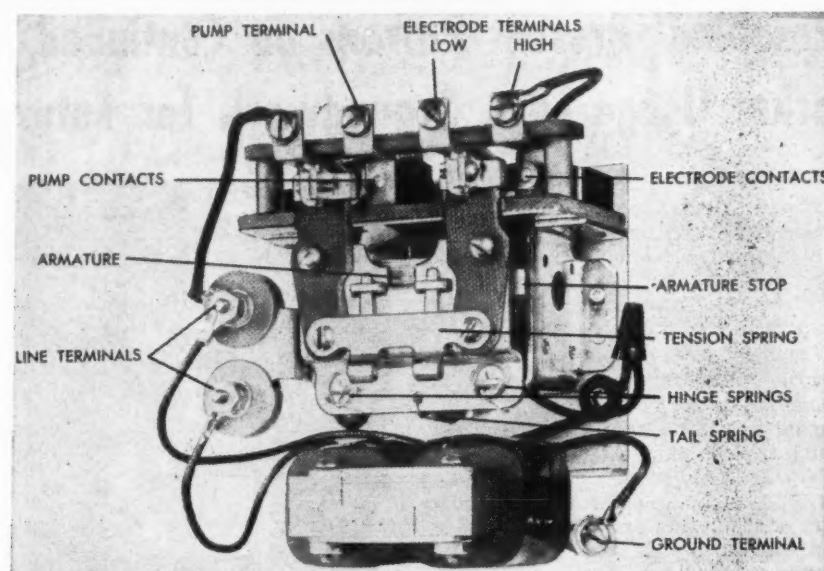


Fig. 3—Liquid level control relay actuated by the electrodes in carbonator.

the carbonator reaches the low level electrode.

The operation of the water pump and the subsequent rise of water level contacting the high level electrode causes continuity of a secondary circuit, causing the relay to open the circuit to the water pump motor. See Fig. 4.

WATER PUMP: The requirements of a water pump for use with instantaneous carbonators are; it must be capable of delivering water to the carbonator at a rate sufficiently in excess of the exit demand of two draft arms or mixing faucets opened simultaneously.

A rate of 60 gallons per hour has been found practical. The pump must be capable of delivering this volume of water at a discharge pressure of 140 lbs. to 190 lbs. depending on the type of carbonator.

With this relatively high pressure, water is forced through a spray nozzle into an atmosphere of CO₂ gas coming from a gas cylinder at a pressure of from 70 lbs. up to 120 lbs. again depending on the type of carbonator used.

This pressure difference causes the entering water to be broken down into fine particles in the form of spray or mist. In this atomized state the water has a greater affinity for CO₂ gas and the process of carbonation takes place.

Fig. 5 shows schematically the physical connection of these component parts.

EFFECT OF COOLING ON CARBONATION: Fig. 5 for the purpose of simplicity illustrates only the carbonation process, and does not show the factor of cooling. Since the finished beverage is more palatable when cooled, the aspect of refrigeration is involved.

Considering the fact that water, at warmer temperatures is in greater molecular motion, its power of retaining carbon dioxide gas is reduced. The retentivity of water for CO₂ gas is greatly increased through cooling.

It has been determined through test, that if cooling is effected before carbonation there is a slight increase in the CO₂ volume content of the finished drink, therefore pre-cooling should be adopted wherever practical.

In many cases however, in a practical application, where the carbonator cannot be located close to the dispenser, post-cooling is effected.

The following data indicates the difference in results of pre-cooling and post-cooling.

Water pre-cooled to 40° F. and carbonated will deliver carbonated water at 4.1 Volumes.

Water entering the carbonator at 80° F. carbonated and post-cooled to 40° F. delivers carbonated water at 3.7 Volumes.

In the case of pre-cooling, the water coil may be constructed of copper tube with its resultant higher heat transfer, but if post-cooling is to be accomplished, the carbonated water cooling coil must be constructed of such impervious material as stainless steel having a heat transfer factor of 80% as related to copper.

Fig. 6 and 7 illustrate pre-cooling and post-cooling respectively.

REFRIGERATION DEMAND OF CARBONATORS: The small unit instantaneous carbonator has made possible the packaged soft drink dispenser in many and varied designs to suit their particular application. These for discussion can be classified as the Automatic or Coin Operated Vending Machine and the Manual or Attended Dispenser.

THE AUTOMATIC VENDING MACHINE: Because of its portability and that its condensing unit motor is plugged in on a 110-volt power supply, it is usually limited in its condensing unit size to 1/3-hp.

Such machines are usually located in theater lobbies and transportation terminals where the cooling demand is in periodic peaks requiring a heavy demand for a short period of time.

To accomplish this end and limited to its use of a 1/3-hp. condensing unit, the machine is provided with a cooling reservoir wherein the temperature of the water can be reduced during the off demand period.

A design factor of five 6-oz. glasses per minute is found acceptable in the majority of installations. The drink dispensed from the machine is usually 6 ounces in volume, five of which is carbonated water, one ounce of syrup.

To effect this heat transfer from and inlet temperature of 80° F. to an exit temperature of 40° F. requires the removal of 4,700 B.t.u. per hour, which is in excess of the hourly B.t.u. capacity of a 1/3-hp. condensing

(Concluded on next page)

CO₂ GAS PRESSURE TEMPERATURE RELATIONSHIP

GAUGE PRESSURE - POUNDS PER SQ. IN.

TEMPERATURE - DEGREES FAHRENHEIT	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
32°	1.71	1.9	2.2	2.4	2.6	2.9	3.1	3.3	3.5	3.8	4.0	4.2	4.4	4.7	4.9	5.2	5.4	5.6	5.8	6.1
33	1.66	1.9	2.1	2.4	2.6	2.8	3.0	3.2	3.5	3.7	3.9	4.1	4.3	4.6	4.8	5.1	5.3	5.5	5.7	5.9
34	1.61	1.9	2.1	2.3	2.5	2.7	2.9	3.2	3.4	3.6	3.8	4.1	4.3	4.5	4.7	4.9	5.2	5.4	5.6	5.8
35	1.56	1.8	2.0	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.8	4.0	4.2	4.4	4.6	4.8	5.1	5.2	5.5	5.7
36	1.51	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.3	3.5	3.7	3.9	4.1	4.3	4.5	4.7	5.0	5.2	5.4	5.6
37	1.46	1.7	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.9	5.1	5.3	5.5
38	1.41	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.3	4.5	4.7	4.9	5.1	5.3
39	1.36	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.3	4.5	4.7	4.9	5.1	5.3
40°	1.31	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.3	4.5	4.7	4.9	5.1
41	1.26	1.6	1.8	2.0	2.2	2.4	2.6	2.8	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.2	4.4	4.6	4.8	5.0
42	1.21	1.6	1.8	2.0	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.6	3.8	4.0	4.2	4.4	4.6	4.7	4.9
43	1.17	1.6	1.7	1.9	2.1	2.3	2.5	2.7	2.8	3.0	3.2	3.4	3.6	3.8	3.9	4.1	4.3	4.5	4.7	4.8
44	1.13	1.5	1.7	1.9	2.1	2.2	2.4	2.6	2.8	3.0	3.1	3.3	3.5	3.7	3.9	4.0	4.2	4.4	4.6	4.8
45	1.12	1.5	1.7	1.8	2.0	2.2	2.4	2.6	2.7	2.9	3.1	3.3	3.4	3.6	3.8	4.0	4.1	4.3	4.5	4.7
46	1.10	1.5	1.6	1.8	2.0	2.2	2.3	2.5	2.7	2.8	3.0	3.2	3.4	3.5	3.7	3.9	4.0	4.2	4.4	4.6
47	1.08	1.4	1.6	1.8	1.9	2.1	2.3	2.4	2.6	2.8	2.9	3.1	3.3	3.5	3.6	3.8	4.0	4.1	4.3	4.5
48	1.06	1.4	1.6	1.7	1.9	2.1	2.2	2.4	2.6	2.7	2.9	3.1	3.2	3.4	3.6	3.7	3.9	4.1	4.2	4.4
49	1.04	1.4	1.5	1.7	1.9	2.0	2.2	2.4	2.5	2.7	2.8	3.0	3.2	3.3	3.5	3.7	3.8	4.0	4.1	4.3

CO₂ VOLUME CHART.

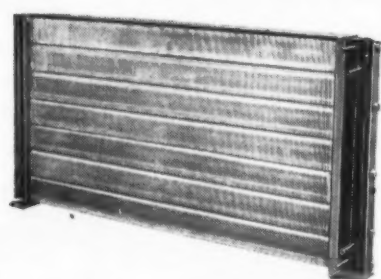
Fig. 2—Table indicates volumes of carbonation.

CUT \$94.00 from every \$100.00 of your Water Bill

THE HEAT-X-CHANGER COMBINATION AIR & WATER COOLED CONDENSER

SAVE 94% OF YOUR ESTIMATED WATER BILLS. GENERALLY PAYS FOR ITSELF WITHIN A YEAR.

The Heat-X-Changer Combination Air and Water Cooled Condenser uses only free air until the air temperature rises above 80°F.



Scientifically designed fins in refrigerant tube transfer heat through many extra square feet of surface. Result: Efficient air cooling. When air temperature reaches 80°F water valve operates. Economically installed. Cleanable water tubes.

WRITE FOR LITERATURE

THE HEAT-X-CHANGER CO., INC.
415 Lexington Avenue, New York 17, N.Y. Brewster, N.Y.

SCHEMATIC WIRING DIAGRAM WATER LEVEL CONTROL

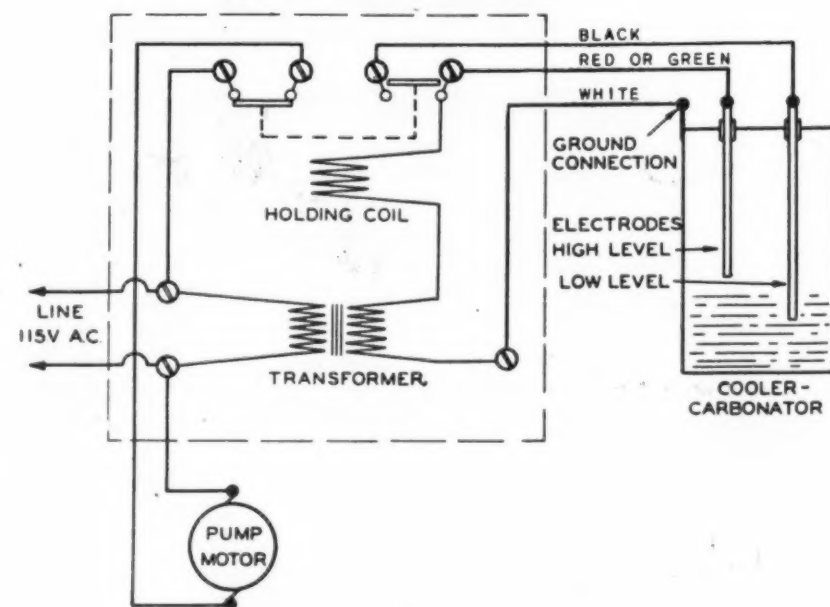


Fig. 4—How rising water contacts high level electrode thus causing the relay to open circuit to the water pump motor.

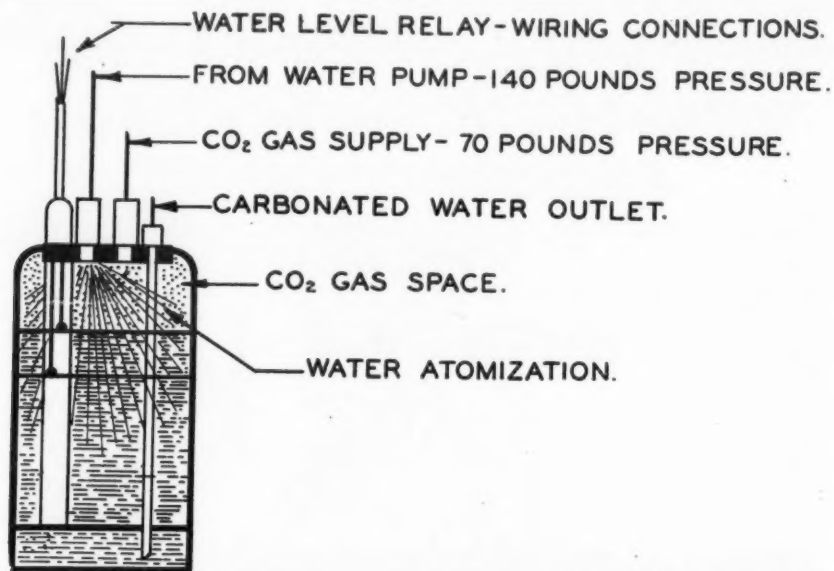


Fig. 5—This sketch of the carbonation process for the sake of simplicity does not include the factor of cooling.

Carbonation Tests Show Pre-Cooling Will Increase CO₂ In Finished Drink

(Concluded from preceding page) unit. Since the demand is intermittent, the excess is absorbed in the cooling reservoir.

Typical of the design of the cooling reservoir is the Sweet Water Bath type of cooling. Wherein an expansion coil and plain water coil are immersed in a water bath, the temperature of which is maintained as close to 32° F. as practical and prevent water freezing.

In such a unit where the water is not agitated, a design heat transfer factor of 12 B.t.u./sq. ft./degree temperature difference/hour, is commonly used in determining the number of lineal feet of tubing used.

This relatively low "K" factor is one of the objectional aspects of this cooling reservoir, and because of its inability to quickly recover from overloads, the automatic vending machine is usually provided with a secondary cooler of the instantaneous type.

Through this combination of storage cooling and instantaneous cooling, Fig. 8 the Automatic Vending Machine is capable of supplying the demand of five 6-oz. glasses of cooled carbonated water per minute, through the practical periodic peaks, and powered with a 1/2-hp. condensing unit.

The cooling of the syrup can well be accomplished through the immersion of a single loop of plastic tubing in the cooling reservoir.

THE MANUAL DISPENSER: Is an Attended Unit in which the soft drinks are dispensed through manual operation of the faucets. Because of its more permanent installation, the unit is quite often, not so limited in its condensing unit size.

Such units are usually installed in drive-in theaters, sports stadiums and state parks, where the demand for soft drinks is more continuous

than in the application of the Automatic Vending Machine.

The heavy, continuous cooling demand on the manual dispenser is quite often accomplished through the use of ice, and in many cases is preferred because of its simplicity, to that of mechanical refrigeration.

A typical unit for ice cooling would comprise an insulated cabinet to form the ice chest, in which the water filter, carbonator, water cooling coil, and carbonated water storage tanks are immersed.

In this manner the effect of pre-cooling and post-cooling is accomplished. Cooling of the syrups is affected by locating stainless steel syrup tanks in the ice pack, and connecting to larger bulk storage tanks pressure fed from the CO₂ gas tank through a regulator and adjusted to 12 lbs. pressure.

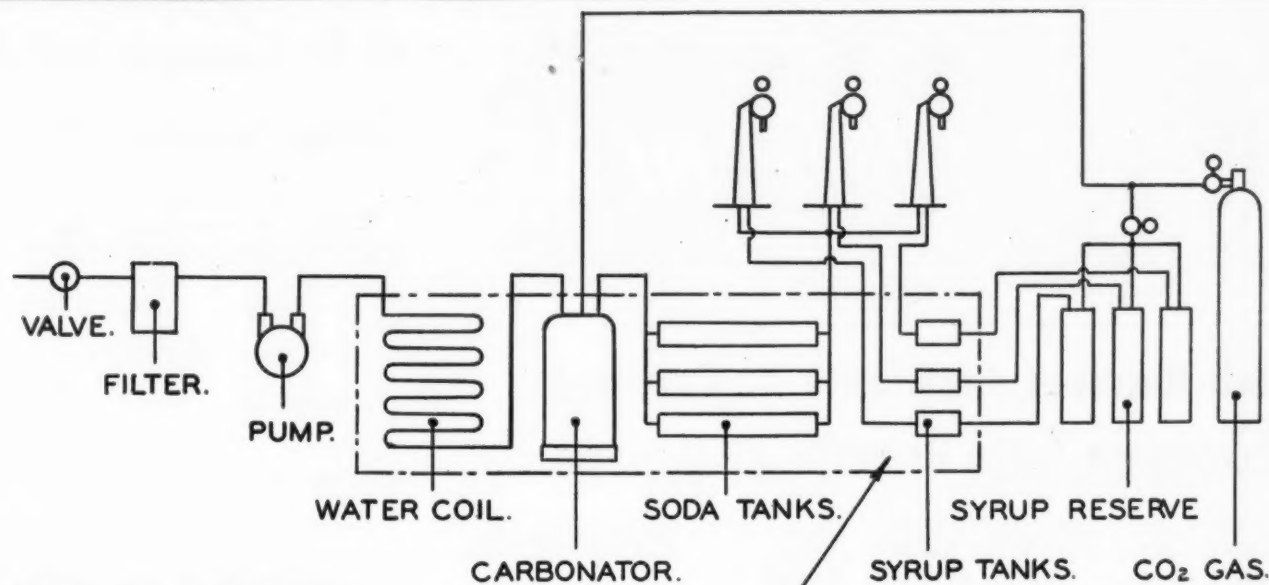
Fig. 9 shows the schematic arrangement.

The mechanically refrigerated manual dispenser, has found a practical application where the facilities for icing are not so readily available. In such cases the condensing unit selection is based on the demand requirements.

To effect the cooling of 30 gallons of water per hour, from an inlet temperature of 80° F. to an exit temperature of 40° F. requires the removal of 10,000 B.t.u. per hour, and the use of a 1-hp. condensing unit.

FORMULA:
30 g.p.h. x 40° T.D. x 8 1/2 #/gal. = 10,000 B.t.u./hr. = 1 hp.

Thirty gallons of water dispensed per hour corresponds to ten 6-oz. drinks per minute or one 6-oz. drink every six seconds. With this as the basis, the demand requirements can readily be determined. If 12 seconds is allowed between drinks, a 1/2-hp. condensing unit would be selected.



ABOVE: Fig. 9—Schematic arrangement of a mechanically refrigerated manual dispenser.

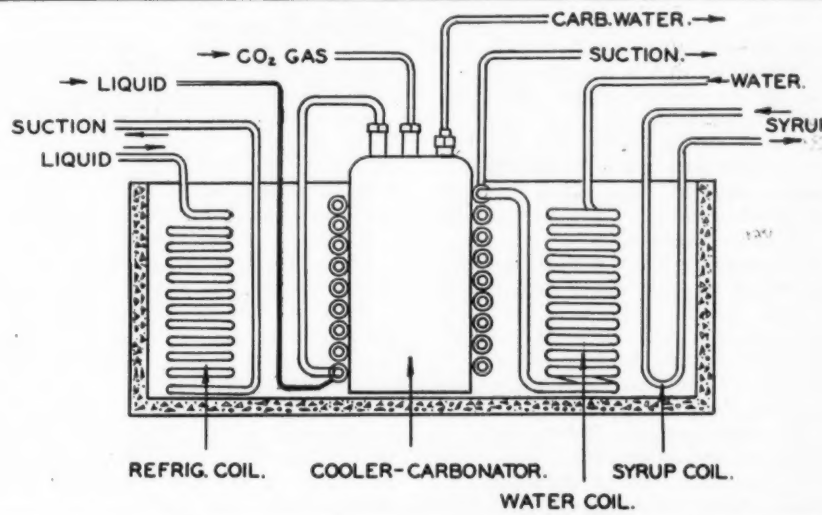
RIGHT: Fig. 8—Diagram of an automatic vending machine system.

Vacuum Storage System For Refrigerator Oils

FT. WAYNE, Ind. — Degasifying and vacuum storage systems for oil-filled cable, dielectric oils in X-ray tubes, refrigerator lubricating oils, and other liquids are described and illustrated in a new four-page bulletin "Degasifier—Figure 625," issued by Bowser, Inc., here.

The self-contained degasifier is for portable or stationary use. Moisture, volatiles, and gases (free or in solution) are removed from the oil.

THIS SPACE REFRIGERATED.



We expect to raise some eyebrows at Atlantic City



We may be a bit early with the "chest-beating" about the new complete Bally line, but we're convinced that it's going to come in for plenty of attention at the All Industry Refrigeration and Air Conditioning Exposition in Atlantic City.

Come expecting to see a line of Bally cases that will equal anything on the market for style and design. We won't let you down. Be ready to learn some interesting facts about Bally construction. For example, see how Bally uses acid-resistant porcelain inside and outside, not baked enamel that peels and turns yellow. You know what that means towards closing a sale. Look at the interior linings made of stainless steel that can't rust like galvanized steel. Examine the workmanship and material that keeps these cases looking like new. Get acquainted with this fast moving Bally line that means big business.

Here's what we *can't* show you at the Exposition. But it's important. Bally has one of the most complete display case factories in the country. Design and production of all major parts to fit the case are completed right in our plant. There are no expensive outside purchases required and the quality is controlled. That's one of the big reasons why Bally can give you the best at prices that are more than competitive.

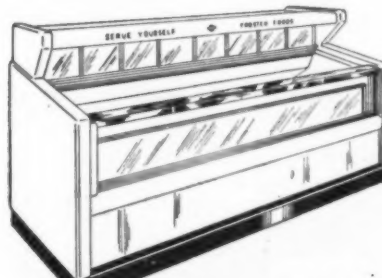
We've got a few other ideas that help to make the Bally line the one that can mean big business for you. Want to talk about them with us? We'll be at booths #142, 144, 146, 241, 243, and 245, at Convention Hall in Atlantic City waiting for you. Or, if you're in a big hurry, just pick up the phone now and call us collect—Bally, 61. It's as easy as that.

Bally CASE and COOLER COMPANY

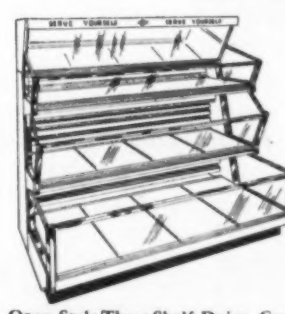
BALLY, PENNSYLVANIA



Open Style Single Shelf Meat Case



Open Style Frozen Food Case



Open Style Three Shelf Dairy Case



Open Style Two Shelf Dairy Case

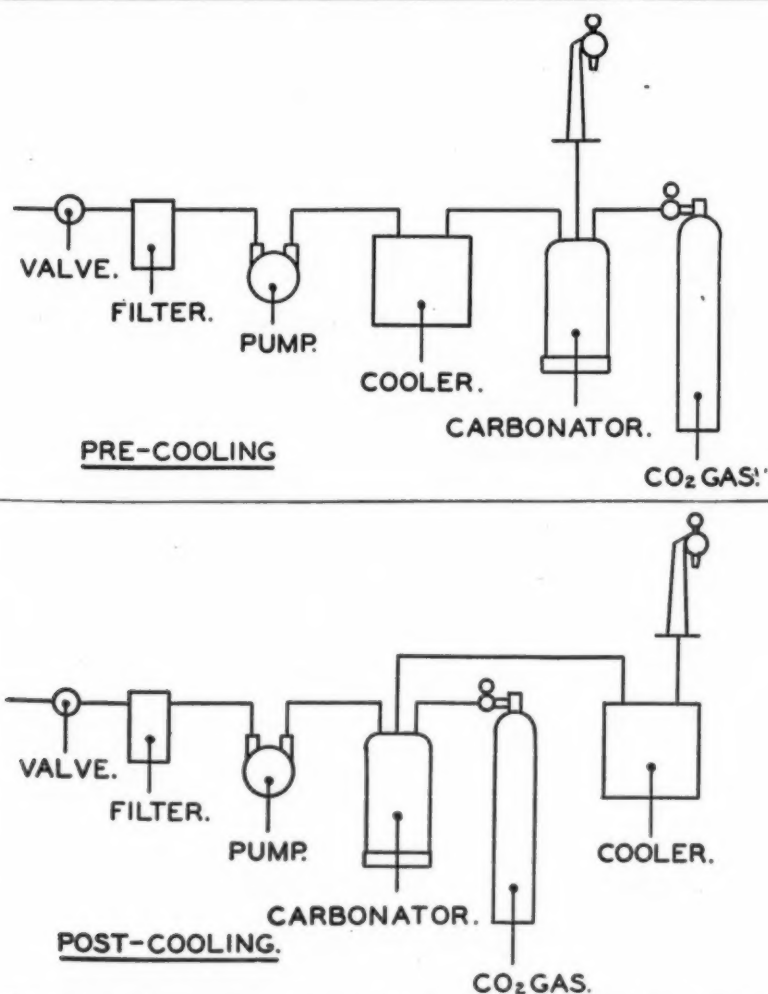


Fig. 6 (Top) and Fig. 7 (Bottom)—These drawings contrast pre-cooling and post-cooling in the process of carbonation.



Koch Receives Certificate of Consumer Acceptance from Republic of Panama

NORTH KANSAS CITY, Mo.—Proudly displayed at Koch Refrigerators here is a certificate awarded the company as a memento of consumer acceptance in the Republic of Panama.

The award was made at the close of a poll conducted by *La Nacion*, Panamanian daily newspaper. It was forwarded to the home office by the local outlet, Distribuidora Electrica, S. A., of Panama City.

Readers were asked to express brand preference for selected articles. Results showed that Koch had received most votes in the commercial refrigerator category.

Koch reports that export business has grown steadily since the close of the war.

An entirely new network of overseas distributors had to be set up after V-J Day. Sparking the export drive for Koch is a separate division of the organization under Larry J. Frank, export manager.

Manufacture for export is not simple, Koch has found. For one

thing, electric current with 125-volt, 220-volt, 50-cycle, single or 3 phase characteristics may have to be provided for. Also, extremes of cold, heat, or humidity—beyond those normally encountered in this country—may make severe demands on the refrigerating equipment.

Koch, accordingly, has installed a special test line, where all foreign consignments are rigorously tested.

Recently Koch made a large shipment of extra short display counters to Latin America. This demand for smaller cases points up the greater dispersion and smaller size of retail food stores in neighbor countries.

Photographs sent in by a Caribbean distributor show Koch cases serving a variety of purposes. One typical 10-ft. display counter is holding: bottled wine, canned beer, bottled fruit juice, canned fruit and fruit juice, mayonnaise, bottled milk, fresh pork chops, packaged bacon, lard, cheeses, lunch meat, pickled fish, canned olives, fresh plums, fresh grapes, and fresh apples.

U.S. Commercial Refrigeration, Air Conditioning Making Deep Inroads Into South American Metropolitan Business

By L. C. Shannon,
Manager of Canadian and Export,
Frigidaire Div., General Motors Corp.

Despite vast distances involved, the intricacies of foreign exchange, shipping, financing, and the hundred and one problems, routine and otherwise, connected with the overseas export, American-made air conditioning and commercial refrigeration equipment is making deep inroads into the South American business scene.

Commercial refrigeration products produced in the United States are finding their way into more and more retail and wholesale houses in South American metropolitan centers where the American way of "doing business" has its most wide-spread acceptance. Brazilian businessmen are modernizing their establishments and, at the same time, are patterning their business practices after tried-and-tested American merchandising methods.

The need for modern refrigeration equipment is especially great in tropical sections of Brazil where hot, humid weather conditions prevail. For example, consider Santos, one of the busiest ports of entry along the Atlantic seacoast:

The average number of days during which rainfall was recorded reached 209 in 1947 while humidity ranged about 86%. During the same period, temperatures averaged more than 69°. The high reading for the year was 97 while the low was about 50°.



This Frigidaire packaged air conditioning unit, installed in the testing room of Melao No gueria & Cia, largest coffee commission house in Brazil, is one of three. The other two are in the general offices and the waiting room. This installation is typical of the acceptance that American-made air conditioning and commercial refrigeration equipment is finding in South American metropolitan centers.

A graphic example of the important role air conditioning is starting to play in Brazilian business can be found among the coffee commission merchants.

Most all coffee is received in 60 kilo bags from the growers. Samples are taken from each lot and sealed in small tins. Later, the coffee is roasted, brewed, and tested by professional "testers," who grade the product before it is sold.

The coffee merchants have awakened to the fact that the comfort of the testers is especially important. A hot humid atmosphere is prone to effect the efficiency of the testing.

Officials of the Melao No gueria & Cia, the largest coffee commission house in Brazil, installed three Frigidaire packaged air conditioners in their Santos establishment. Two 3-hp. units and a 5-hp. model circulate cool, filtered, dehumidified fresh air in the coffee testing room, the waiting room, a private office, and general offices.

HIGH WATER RATES CALL FOR COOLING TOWERS

As water rates are fairly high, the installation was outfitted with a large water tower and pump to conserve water by A. D. Moreira & Cia, the Frigidaire dealership. As company officials attested, the "offices are no longer ovens" and greater efficiency has been noted in coffee tasting rooms.

Another American product gaining favor in Brazil is modern display cases. Until U. S. manufacturers brought in their models, the majority of display cases were of the flat-top, counter-high type, constructed of glass and marble. Because the glass was of poor grade when adjudged by American standards, it was prone to fog and cloud up with moisture, hiding the actual merchandise display.

Brazilian commercial case and fixture suppliers usually manufactured the case to the customer's specifications as far as length was concerned. Strangely enough, the prime use of the cases was not for display—but for badly needed refrigeration.

DISORDERLY ARRAY PREVAILED

Before the advent of smartly-styled American cases such as introduced here by Frigidaire, it was rare to find produce and merchandise attractively displayed. Instead, merchandise was piled in disordered arrays and included everything requiring refrigeration from bottle goods to pickles.

Even today, there is little or no competition in merchandising meats. Beef in this locality is sold in meat shops three days a week and the butcher disposes of his entire allotment during these selling days.

This has been a primary factor, retarding the general use of the American-type display case, because until the present there has been little need for this advanced design in the face of existing market conditions. However, with scarcities vanishing and competition on the march, the need for better merchandising techniques is growing.

One of the first installations of its kind was made in a Sao Paulo meat store where customers average about 2,400 per day. Four modern display cases, affording 40 ft. of attractive display area were installed.

At present, Brazilian suppliers of cases and fixtures are copying American design. However, they finish exteriors with enamel paint and galvanize interiors because of a lack of porcelain finishing facilities.

The Brazilian commercial dealer usually must do a far more complete job than his American counterpart. For instance, in securing a bid for a walk-in cooler or cold storage room, the dealer usually does all of the construction work, including insulation, refrigerator doors, wiring, drains, and all other phases of the job in addition to installing the refrigeration equipment. Moreover, he then finances the entire job for periods ranging from eight to 18 months.

MASS OF DETAILS WITH MOST INSTALLATIONS

To illustrate the details facing the Brazilian Frigidaire commercial dealer, consider the installation of a display case in the Bolero bar and restaurant in Santos. When Frigidaire Dealer F. Moreira da Silva sold the job, not only did he install the display case but he built and installed a bar, counters, tables, and chairs. The entire installation amounted to the equivalent of 30 thousand American dollars—which amount he financed after closing the sale.

It follows that the Brazilian commercial refrigeration dealer is a "jack of all trades" in the strictest sense of the word. He must "manufacture" much of the equipment to go along with refrigeration products as there are no local sources for many items which are readily available in the States. Usually, the refrigeration portion is the smallest expense in the complete over-all installation.

In the final analysis, Brazilian business leaders, particularly in the metropolitan centers, are becoming more and more "sold" on the efficient, streamlined commercial refrigeration and air conditioning equipment as supplied by American builders. With this trend becoming more sharply defined from year to year and considering the great need for modern refrigeration, the Brazilian market possibilities are virtually unlimited.

Worthington Officials To Visit Associated Plants On European Tour

HARRISON, N. J.—Hobart C. Ramsey, president, and S. Riley Williams, vice president in charge of foreign business, Worthington Pump & Machinery Corp., have left for Europe to visit the corporation's associated manufacturing plants.

The officials plan an extended tour to get a first-hand report on the effect of devaluation on the overall operations of associated plants and to learn what progress Europe has made during the past few years as a consumer of American goods.

Fully realizing that Europe must also export to survive, Ramsey and Williams will investigate the possibilities of exports from Worthington's associated plants to other foreign markets. The plants which they will visit are located in Newark-Trent, England; Le Bourget, France; Madrid, Spain; and Milan, Italy.

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engineer with
a background in
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As in other books of "The Refrigeration Library," the material is presented in a simplified, easy-to-understand manner, with charts, tables, problem examples, and conclusions, serving as instruction for the beginner and reference for the experienced installer.

Mr. LaSalvia has had 30 years experience in air conditioning, refrigeration, heating, and ventilating. This experience has covered designing, installing, and testing more than 1,000 air conditioning systems of all types, in addition to conducting training schools and college classes.

This first manual No. K-1 (additional manuals to be published in the near future) covers the fundamental physics of air conditioning, use of charts, methods of ventilation, figuring of air requirements, refrigeration problems as related to air conditioning, use of fans, methods of air distribution.

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Industry Show Preview

Mock-Up Model of All-Steel Walk-In at Wilson Booth

Star attraction at the Wilson Refrigeration, Inc. booth at the All-Industry Exposition will be a small mock-up model of a new all-steel sectional-type walk-in refrigerator that will be made available by the company in 1950.

Sharing the spotlight will be the 1950 models of the Wilson self-contained freezer of approximately 30 cu. ft.

Other products to arrest visitor attention will be the new front opening milk cooler, the "Zero Spray," 8 and 12-cu. ft. chest-type freezers, a stainless steel dry-storage beverage cooler, a new model sectional-type ice cream storage cabinet, the sectional-type "Zerosafe" farm freezer, and the "Zeroflow" immersion-type farm milk cooler.

Many New Items Promised By Weatherhead Co.

There will be many new items of interest at the Weatherhead Co. booth at the All-Industry Exposition, according to C. H. Boylan, manager of refrigeration division sales.

Commenting on the exhibit, he said, "In addition to our regular line of brass SAE fittings and flare nuts, we will display a new line of large-size relief valves; combination accumulators and driers, in both copper and steel; spun-end type copper accumulators; spun-end type copper driers with both sweat and SAE end connection; new drawn cup type refrigerant receivers; and a complete line of valves for hermetic applications in both brass and steel."

Fogel Seeks Attention With 3 'Shining Stars'

Three new "shining stars" in the Fogel line of commercial cases are expected to rivet attention on the Fogel Refrigerator Co. display at the All-Industry Exposition.

These "stars" are the company's new angle-vision frozen food merchandiser, its "Champion" meat case, and its open-type, triple-deck, self-service merchandiser for fruits, vegetables, packaged meats, and dairy products.

The 72-UF frozen food merchandiser is claimed to give the customer a better view of merchandise and thus stimulate impulse buying. Being 39 in. high, it is said to be able to double as a check-out stand, or an island display (two units back to back).

The Champion meat case is all-porcelain finished and is available in 6, 8, 10, and 12-ft. lengths for either remote or self-contained installation. It features specially designed display facilities, interior fluorescent flood-lighting, large tilted display window, and "back-angle" service doors.

The case also offers "add-on" construction whereby adjacent ends of separate cases can be removed, the cases joined, and one long integral meat case formed.

The self-service merchandiser, called the DCO-6, occupies only 19 sq. ft. of floor space, but provides 30 sq. ft. of display area. Refrigeration is by the Fogel-Aire temperature and humidity control.

Fogel exposition representatives will be William Fogel, president; S. H. Batt, national sales manager; Maurice Zatzko, export sales manager; Harry Richman, western sales manager; Ed Banios, advertising manager; and Field Representatives L. Redeyoff, Eddy Miller, Harry Bell, G. T. Smith, and J. W. Jennings.

Paragon Will Exhibit 'Chrono-Spray' Defroster

Among the new products to be displayed in the Paragon Electric Co. booth (656) at the All-Industry Exposition is expected to be the recently introduced 300-M series of time controls for automatic defrosting and Chrono-Spray Defrosting model MG3-KT1 for water spray defrosting of cooler plants, unit coolers, walk-in boxes, and air conditioning systems.

According to George E. Petrus, manager of Paragon's wholesale division, the Chrono-Spray is particularly

What Happened In the Industry

As Reported In Air Conditioning & Refrigeration News

20 Years Ago . . .

Based on gate receipts for the first four days, it was estimated that 300,000 would attend the Dairy Exposition in St. Louis, Oct. 12 to 19. . . . Servel acquired Swedish interest in Electrolux.

The Utilities Engineering Institute, offering home study courses, announced that it had refrigeration students in 12 foreign countries as well as in 41 of the 48 states. . . . Frigidaire, Electrolux, and Kelvinator exhibited in the 1929 Salon des Arts Menagers at the Grand Palais in Paris.

. . . People

J. S. Sayre became sales manager in charge of domestic and commercial distribution for Kelvinator. . . . V. E. Vining, sales manager of Servel Sales, Inc., spoke on "Electric Refrigeration" before the Evansville, Ind. Rotary club.

15 Years Ago . . .

Peerless Ice Machine Co. opened its second factory in Long Island City, N. Y. . . . Richard E. Byrd, Antarctic explorer, was reportedly attempting to bring back with him some live penguins. They were quartered in an air conditioned room aboard the *Jacob Rupert*.

At the first annual convention of the Refrigeration Service Engineers Society in Chicago Harry Busby of Harby Refrigeration Service recommended a sliding rate for service charges with a minimum of \$2.00 for calls up to one-half hour, \$1.00 for the next half hour, and \$2.00 for each additional hour. At this same convention heated discussions took place on the topics of "unionization" and "city licensing"; also considered at the meeting was operation and application of various refrigeration apparatus.

. . . People

Bonnell W. Clark was appointed vice president and general manager of Westinghouse Electric Supply Co. . . . Leonard promoted H. H. Dobbertein to assistant advertising manager.

10 Years Ago . . .

Rema committee met at Turkey Run State Park to complete plans for the Second All-Industry Refrigeration and Air Conditioning Exhibition to be held in Chicago, Jan. 15-18. . . . American Coils, Inc. entered the refrigeration industry as a manufacturer of coils and auxiliary equipment.

Midwest Refrigeration Supply Jobbers Association elected as president Frank Pond of Refrigeration & Industrial Supply Co., Inc., Minneapolis.

. . . People

H. M. Campbell advanced to sales manager of Norge's heating and air conditioning division. . . . Ben T. Roe became domestic sales manager for Universal Cooler Corp.

noteworthy because it is, to his knowledge, the only "fail safe" water spray defroster on the market. He said that fans cannot turn on during the water spray cycle.

The 300-M series can be applied to almost any type of defrosting system. Because of its capacity, it can be installed into existing units without the need for auxiliary relays.

Hupp To Show Display Cabinet, Beverage Vender

Hupp Corp. will feature its new "Hupp Merchantizer," a portable, low-cost, low-temperature refrigerated display cabinet for display of frozen foods and ice cream products.

Also to be shown will be the 1950 model of the Hupp Console-Cup Cold Drink Machine, a refrigerated cup-vending machine for carbonated beverages.

'Winterization' of Room Air Conditioners Offers Off-Season Work for Servicemen

INDIANAPOLIS—"Winterization" of room air conditioners will keep service personnel busy in winter and provide a profitable source of off-season income for the refrigeration service firm, Edwin Barth, Philco Corp.'s national service manager on air conditioners, freezers, and refrigerators, told the Hoosier State RSES association at its second annual convention here.

An annual overhaul of room units is advisable, he indicated, and this can be best done during the winter when the units aren't being used and servicemen are not overworked as they usually are in summer.

Most of Barth's discussion on room units, however, was devoted to their proper application with the implication that service calls for unsatisfactory operation may more often be the result of poor application rather than failure of the equipment in the unit itself.

"A conditioner's job," he reminded the RSES group, "is to keep a room comfortably cool, not produce a specific temperature. And the main factor in producing comfort is lowering the humidity within the room."

Among the heat load factors which an air conditioner must overcome, he said, are walls exposed to the outside, the "direction of outer walls face being most important."

"The least amount of heat comes from the north wall; there's not much on the east wall, more on the south, and most on the west wall. What these walls are constructed of also

has a great bearing on the amount of heat transfer.

"Masonry walls are usually best while frame walls will allow more heat transfer. Shading of the building is also very important.

"An unshaded wall can have two-and-a-half times the heat transfer of shaded walls, and windows are even more important. In many cases the greater part of the heat transfer occurs through the window, where we also get the radiant heat of the sun.

"If a window has an awning or is completely shaded there is much less heat transfer, however, so it is advisable to install awnings on south and west windows. If this is done you can often install a smaller air conditioning unit. The awnings should be ventilated, however," he cautioned.

Other factors that contribute to the heat load are interior walls, which Barth said are usually rated the same as shaded exterior walls.

"The type of ceiling is important, and so are skylights. Another source of heat transfer is the floor, with the most transfer being through a floor directly over a finished ceiling. There doesn't seem to be so much heat transferred through the floor when the ceiling below is unfinished."

Infiltration of outside air through cracks around doors and windows adds to the load on a conditioner.

"Although 10 c.f.m. of outside air per person is required for ventilation, the introduction of larger quantities will increase the load on the unit.

"Incidentally, the presence of ex-

haust and supply fans within the room is often the cause of poor operation of an air conditioner, especially in a small room.

"For example, an 8-in. fan with four blades operating at motor speed—1,725 r.p.m.—would exhaust approximately 500 c.f.m. This would mean an incoming air supply of 500 c.f.m. also, and if the outdoor temperature was 95° F., this would be a load of 9,900 B.t.u./hr., which is greater than the capacity of a ½-ton air conditioner," Barth declared.

Omaha Firm Charges \$36 For 'Winterizing' Room Coolers

OMAHA, Neb.—Pawl Engineering Corp., 2820 Harney St., has inaugurated a new service wherein room coolers will be stored for the winter, and early reaction has been good, the management indicated.

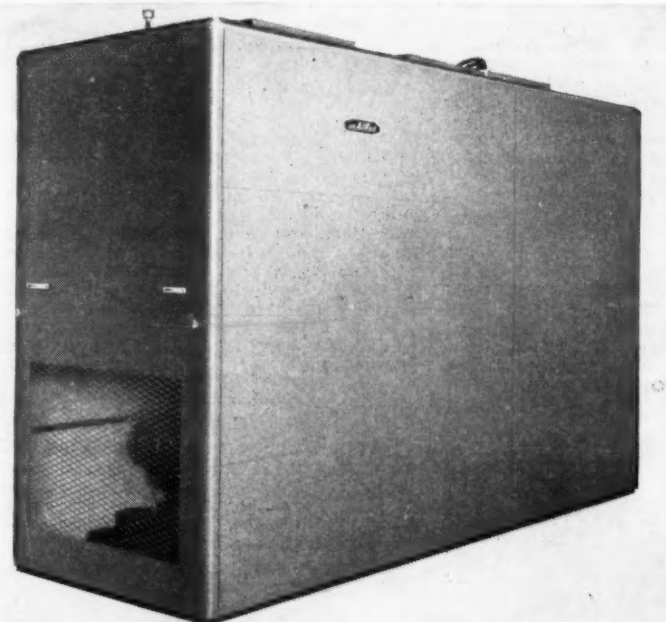
The firm removes the patron's cooler, stores it in clean heated quarters, cleans, adjusts, and tests the unit, and reinstalls when desired in the spring, all for \$36.

The Pawl firm is a York sales and service agency, and the work on room coolers is done by trained refrigeration men, while the unit is insured while in the firm's possession. The charge for console-type units ranges slightly higher than \$36.

Newspaper advertising and direct mail have been used to call attention of room cooler owners to the fact that "Room coolers should be removed in the winter to prevent damage to the unit from smoke and freezing."

BIG NEWS AT THE SHOW

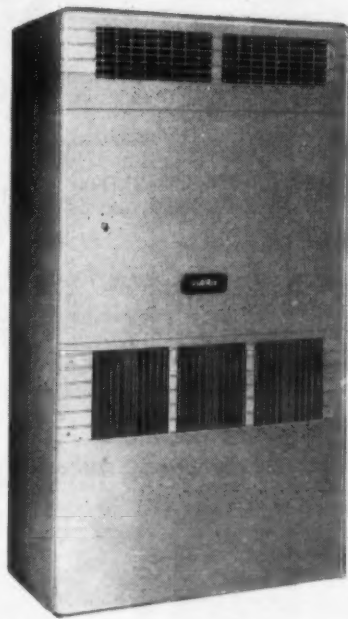
UNITED STATES AIR CONDITIONING CORPORATION • MINNEAPOLIS, MINNESOTA



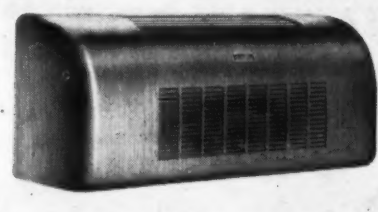
REFRIGERATED COOLER-AIRE 3-40 TONS

Ever know a customer who didn't want to cut costs? Neither did we. That's why Refrigerated Cooler-Aire sales keep right on climbing. This all-in-one "central plant" unit saves operating costs, maintenance costs, current costs and is a regular camel when it comes to water . . . saves up to 95%. See it at the show.

NEW 5-YEAR WARRANTY ON THESE UNITS

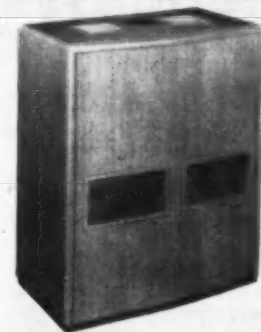


usAIRco STORE CONDITIONER 3 AND 5 TONS



WINDOW UNIT 1/4 TON

Added sales ammunition in the shape of a broad 5-year warranty on usAIRco Window Units, Consoles and Store Conditioners make these products more valuable than ever. Warranty covers shipping charges on faulty parts and their replacements as well as installation costs.



CONSOLE UNIT 1/4 AND 1 TON

usAIRco to Announce New Dealer Sales Plans

Biggest news at the All Industry show may well prove to be usAIRco's disclosure of a new completely revamped dealer sales plan. All the details will not be made public until the convention opens, but the company's sales executives have hinted at sweeping changes which point to a far more profitable arrangement for dealers.

"No attempt will be made to 'load' dealers," said a company official. "Our talks with hundreds of dealers indicate that it's unnecessary to demand fulfillment of arbitrary quotas provided dealers are given sufficient profit incentive and concentrated selling help. We think our policy is an enlightened one which could easily set the future pattern for the industry."

Air conditioning dealers are urged to visit usAIRco's booths at the show and get the story.

Year 'Round Air Conditioning Without Ductwork



MODU-AIRE

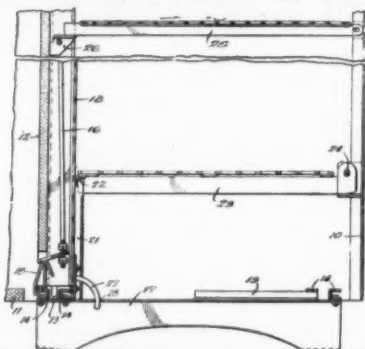
Air condition ten rooms or ten hundred without an inch of ductwork! Modu-Aire heating and cooling units are supplied by easily installed, economical pipes from a central water or coolant system. Converts to heat in winter for all-weather air conditioning.

DON'T MISS usAIRco IN BOOTHS 138 AND 140
6TH ALL INDUSTRY REFRIGERATION AND AIR CONDITIONING EXPOSITION
ATLANTIC CITY, NOVEMBER 14 TO 18

PATENTS

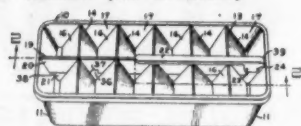
Weeks of June 7 & 14
(Continued)

2,473,169. REFRIGERATOR CAR WITH A MOVABLE BULKHEAD. Charles L. Moorman, Millington, Ill., assignor to Union Asbestos & Rubber Co., a corporation of Illinois. Application Oct. 22, 1945. Serial No. 623,714. 5 Claims. (Cl. 62-19.)



1. In a refrigerator car or the like having a lading rack above its floor and terminating at a point spaced from the end of the car, a bulkhead in the car extending substantially from the top to the bottom thereof and mounted for movement from a retracted position adjacent the end of the car to an extended position adjacent the end of the lading rack, a transversely extending beam adjacent the end of the lading rack and in horizontal alignment therewith to support the bulkhead when it is in its extended position, and a floor rack pivoted adjacent the end of the lading rack for movement from a horizontal position in which it forms a continuation of the lading rack to a vertical position against the inner surface of the bulkhead when the bulkhead is in its extended position.

2,473,178. ICE TRAY. Maximilian Siebigteroth, Detroit, Mich., assignor to Charles B. Kemp, Grosse Pointe, Mich. Application June 23, 1947. Serial No. 756,352. 8 Claims. (Cl. 62-108.5.)

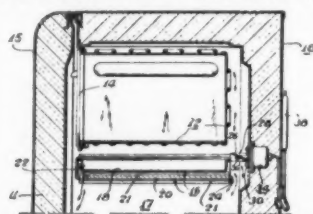


1. In a sharp freezing container the combination of a tray and a grid adapted to be removably positioned in said tray, said grid comprising a longitudinal partition which comprises an upper and lower member, a plurality of transverse partitions forming transverse walls and dividing the tray into a plurality of compartments, one transverse wall of each compartment being connected to and movable with said upper member and the other transverse wall of each compartment being connected to and movable with said lower member, manually operable means cooperating with said upper and lower members for imparting bodily movement to said upper member relative to said lower member so that one transverse wall of each of said compartments is bodily moved with respect to the other transverse wall of said compartment and means for bodily moving said lower member with respect to said tray so that the transverse walls connected to said member are bodily moved with respect to the walls of said tray.

2,473,322. REFRIGERATOR HAVING MEANS FOR MINIMIZING CONDENSATION. Orland H. Yoxsimer, Mansfield, Ohio, assignor to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Nov. 12, 1947. Serial No. 785,476. 4 Claims. (Cl. 62-105.)

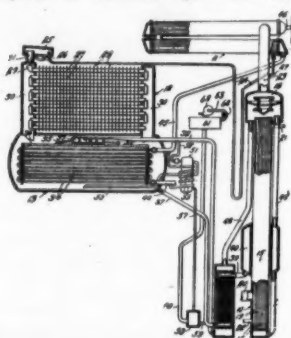
1. A refrigerator comprising a food storage chamber having thermally insulated front, side, rear, top and bottom walls, said front wall including a door and being of lesser thermal insulating value than said side and rear walls, a cooling unit in the upper portion of said chamber, means for maintaining said

cooling unit at a temperature below freezing, a partition in said chamber, said partition including a first plate located below said cooling unit, a second plate below said first plate and near but spaced therefrom to define a first air passage between said plates, said second plate comprising material which is transparent to radiant heat, said first and second plates having edges spaced from said door when closed to define a second air passage adjacent said door, said first and second plates also having edges spaced from the rear wall of said food storage



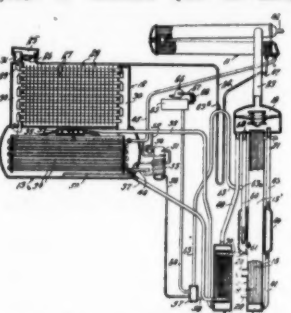
chamber to define a third air passage adjacent said rear wall, said first air passage communicating with said second and third air passages, the side edges of said first plate being sealed to the side walls of said chamber to prevent substantial passage of air therebetween, and a valve in said third air passage and adapted and arranged to substantially close the space between said first plate and the rear wall of said chamber.

2,473,384. APPARATUS FOR AND METHOD OF RETURNING PURGED INERT GAS TO AN ABSORPTION REFRIGERATING SYSTEM. Lowell McNeely, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Jan. 13, 1948. Serial No. 2,039. 8 Claims. (Cl. 62-119.)



1. An absorption refrigerating system including a high and low-pressure side, means for collecting non-condensable gas in the low-pressure side of the system, means for entraining at least a portion of the collected non-condensable gas into absorption solution in the low-pressure side of the system, means for withdrawing from the low-pressure side of the system any collected non-condensable gas beyond that entrained in the absorption solution, and a gas trap for storing the withdrawn non-condensable gas during on periods of operation of the system, said gas trap and said withdrawing means being so connected and arranged as to return the stored non-condensable gas to the low-pressure side of the system during off periods of operation.

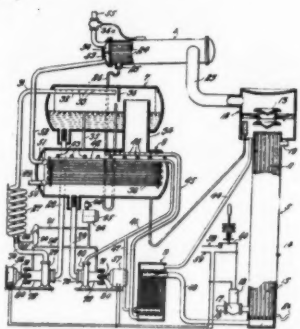
2,473,385. ABSORPTION REFRIGERATION METHOD AND SYSTEM HAVING PROVISION FOR THE RETURN OF PURGED GAS. Eugene P. Whitlow, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Jan. 13, 1948. Serial No. 2,085. 17 Claims. (Cl. 62-119.)



1. An absorption refrigerating system including a high and a low-pressure side,

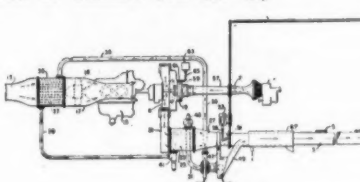
means for collecting non-condensable gas in the low-pressure side of the system, means for entraining at least a portion of the collected non-condensable gas into absorption solution in the low-pressure side of the system, means for withdrawing from the low-pressure side of the system any collected non-condensable gas beyond that entrained in the absorption solution, and a gas trap for storing the withdrawn non-condensable gas during on periods of operation of the system, said gas trap being provided with means forming a liquid seal for retaining the non-condensable gas therein during on periods of operation of the system, and means for draining said liquid seal during off periods of operation of the system.

2,473,389. LOW-PRESSURE ABSORPTION REFRIGERATING SYSTEM. John G. Reid, Jr., Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Jan. 2, 1947. Serial No. 719,871. 6 Claims. (Cl. 62-119.)



1. In a vacuum type refrigeration system having a plurality of interconnected elements to provide a circuit for refrigerant, a pump for circulating liquid in said system and so constructed and arranged as to deliver the liquid at a pressure greater than atmospheric pressure, said pump having a shaft extending out of said system and a housing surrounding the shaft, connecting means for supplying liquid delivered from said pump to said shaft housing, control mechanism for operating the pump periodically, and structure in said connecting means comprising a check valve for maintaining the liquid in said shaft housing at a pressure greater than the atmospheric pressure between periods of operation whereby to seal the shaft to prevent air from entering the system.

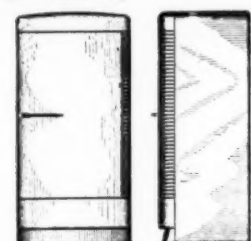
2,473,496. AIR CONDITIONING SYSTEM. Waldemar F. Mayer, Los Angeles, Calif., assignor to The Garrett Corp., Los Angeles, Calif., a corporation of California. Application Oct. 11, 1944. Serial No. 558,148. 17 Claims. (Cl. 257-3.)



1. In an air conditioning system, air pumping means, a duct for conveying air under pressure from said pumping means to an enclosure to be conditioned, power operated means for conditioning the air flowing in said duct, an air motor for driving said last means, and means including a temperature controlled valve mechanism for bypassing air from said duct through said air motor and back to said duct.

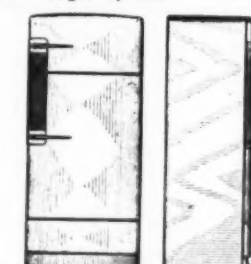
DESIGNS

154,186. DESIGN FOR A REFRIGERATOR. Ray C. Sandin, Oak Park, Ill., assignor to Hotpoint, Inc., a corporation of New York. Application Feb. 25, 1948. Serial No. 144,732. Term of patent 14 years. (Cl. D67-3.)



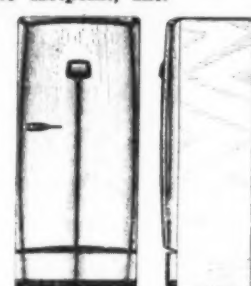
The ornamental design for a refrigerator, as shown and described.

154,187. DESIGN FOR A REFRIGERATOR. Ray C. Sandin, Oak Park, Ill., assignor to Hotpoint, Inc.



The ornamental design for a refrigerator, as shown and described.

154,188. DESIGN FOR A REFRIGERATOR. Ray C. Sandin, Oak Park, Ill., assignor to Hotpoint, Inc.



The ornamental design for a refrigerator, as shown and described.

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POSITIONS WANTED

WILL DISCUSS mutual possibilities with producer or distributor air conditioning or allied lines appliances interested in man of broad experience, capabilities, and educational background. Breadth in sales-consumer direct to producer management, exhaustive know-how internal controls. Anticipate road work, prefer Chicago area but consider seriously advantageous move. BOX 3325, Air Conditioning & Refrigeration News.

MANUFACTURERS OR jobbers—can you use a 40 yr. old with an excellent 16 yr. record of achievement in field service—contracting—application & sales engineering. National reputation—1½ hp. to 300 T. Single, free to travel. Available Nov. 1st. BOX 3326, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

REFRIGERATION DESIGN engineer. Must have had experience on condensing units over 2 H.P.—methyl chloride and "Freon." Excellent opportunity. Salary open. All replies confidential. Please give complete information in first letter. Write to Personnel Director, GENERAL REFRIGERATION DIVISION, Yates-American Machine Company, Beloit, Wis.

LABORATORY ENGINEER: One of the largest manufacturers of commercial refrigerators needs experienced laboratory engineer to take over operation of up-to-date research laboratory. Should be familiar with Fischer-Porter flowmeters. Brown strip chart multiple potentiometer, in addition to standard instruments. Give complete information on qualifications, salary requirements, etc., in first letter. BOX 3294, Air Conditioning & Refrigeration News.

MECHANICAL ENGINEER: Old and well established franchise dealer contractor in Connecticut, within one hour from New York wants a thoroughly experienced air conditioning, refrigeration and heating engineer. Must be capable of handling up to 50 tons. A well grounded knowledge in all phases of design, estimating, installation and contracting essential. BOX 3297, Air Conditioning & Refrigeration News.

AIR CONDITIONING manufacturer wants sales minded, aggressive man in self-contained air conditioning unit applications to fill sales manager position in Southeast territory. Must have ability to work with existing dealers and promote new accounts. Permanent position with good remuneration. BOX 3312, Air Conditioning & Refrigeration News.

IF YOU are a good retail salesman answer this ad. Nationally advertised air conditioning manufacturer wants hard hitting aggressive retail salesman to work with dealers in Southwest territory. Experience in self-contained units necessary. Man must be free to travel and have ability to sell air conditioning. BOX 3313, Air Conditioning & Refrigeration News.

DISTRICT SALES manager for complete commercial refrigerator line. Assignment to be factory designated territory in U.S.A. Real opportunity for a young, capable, aggressive sales executive with experience. Starting salary high four figures. BOX 3318, Air Conditioning & Refrigeration News.

SERVICE MANAGER—To supervise branch service representatives contacting home appliance and commercial refrigeration dealers in three Midwestern states for factory branch of large manufacturer. State full experience, qualifications, salary requirements, etc., first letter. BOX 3322, Air Conditioning & Refrigeration News.

MECHANICAL ENGINEER & salesman: Old established franchise dealer contractor in Detroit wants a thoroughly experienced air conditioning, refrigeration and heating engineer. Must be capable of handling up to 60 tons. A well grounded knowledge in all phases of design, estimating, installation and contracting essential. All replies confidential. BOX 3323, Air Conditioning & Refrigeration News.

EXPERIENCED SALES representative having established refrigeration and air conditioning contractor clientele to act as manufacturer's agent for national manufacturer of high side equipment. Attractive territories available. Write BOX 3324, Air Conditioning & Refrigeration News.

SALESMAN WANTED: To sell home freezers, walk-ins, a good chance for one with selling experience and ability. Have two of the best lines on the market. BOX 3327, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

WHOLESALE SEALED unit exchange and rebuilding. We will rebuild and convert your unit to "Freon-12." One year guarantee. Write for price list and shipping instructions. ADVANCE REFRIGERATION COMPANY, 829 East McNichols Road, Detroit 3, Michigan.

COMPRESSORS, NEW 1, 3, 5 & 7½ H.P. water cooled Universals and Copelands at less than distributor's cost. BIMEI CO., Cincinnati, Ohio.

HERMETIC UNITS—Brand new, complete, "F-12" fan cooled units—heavy duty capacitor start with overload protection. G.E. motors. ½ HP—\$30.00, ¾ HP—\$35.00. Specify normal or low temperature application. Pressure or temperature control, \$4.50 extra if desired. KEL KOLD CO. INC., Johnstown, N. Y.

FOR SALE: 180 ton Patterson-Kelley direct expansion shell-and-tube water chiller. Three refrigerant circuits and one water circuit. Used one year. Perfect condition. Will sell for half of today's market price. GORDON LOZIER CORPORATION, 1612 California, Omaha, Neb.

COMPRESSORS "FREON." 11 Westinghouse RW25 (25 H.P.). 4 condensers, RW705, for 4 of above compressors. All used. Offer at bargain. NATKIN & COMPANY, St. Louis.

SERVEL HERMETIC units. Model L2BA-1C ½ H.P. "F-12." Complete with receiver. \$53.10. Model H2EA1C ½ H.P. "F-12." Complete with receiver. \$53.10. Faraday alarm system complete with trickle charger—Rancostat—Neon bulb and holder. \$3.25. All items brand new. Send for free folder today. TRACO INDUSTRIAL CORPORATION, 455 West 19th Street, New York 11, N. Y.

HENRY RELIEF valve. Model 529-S. With inlet ½" ODS—Outlet ½" ODS. Set for 200# pressure. Over-all price \$2.50. Brand new. TRACO INDUSTRIAL CORPORATION, 455 West 19th Street, New York 11, N. Y.

UNIVERSAL HERMETIC unit. Model S13L-1 ½ H.P., \$49.50. Universal heavy duty model 25FS—½ H.P. complete with Ranco pressure control \$53.20. Shipped F.O.B. New York. Guaranteed brand new! Send for free folder. Order Now! TRACO INDUSTRIAL CORPORATION, Dept. A, 455 West 19th St., New York 11, N. Y.

TECUMSEH COMPRESSOR bodies, model 2300 ½ H.P. twin cylinder, complete with flywheel and service valves, \$18.50. Electric products thermostatic expansion valves ¼-ton \$2.95, ½-ton \$3.25, 1-ton \$4.00, 2-ton \$5.00. All "F-12" or CH₂Cl₂. ¾" inlet—½" outlet. Shipped F.O.B. New York. Guaranteed brand new. Send for free folder. TRACO INDUSTRIAL CORPORATION, Dept. B, 455 West 19th St., New York 11, N. Y.

DETROIT EXPANSION valve #894—Inlet ¼" SAE. Outlet ¼" SAE. Capillary 60" capacity ½ T. Max. Op. press. 15# "Freon." \$1.95 each. Brand new. TRACO INDUSTRIAL CORP., Dept. B, 455 West 19th St., New York 11, N. Y.

WE DESIRE to dispose of various standard refrigeration valves, fittings, etc., as manufactured by Henry, Mueller Brass, Kerotest, York & Crane. If interested, write to BOX 3309, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

WILL SELL stock up to 50% to refrigeration engineer. Net profit 1948 of \$19,163.77 and \$235,000.00 gross. Taxes paid on this figure. We have largest, most beautiful display rooms of any dealer within 50 miles. Store fixture and appliance business. Sales 1949 ahead of 1948 volume for first two taxable quarters. Indiana location. Reply BOX 3304, Air Conditioning & Refrigeration News.

SCHOOLS

DETROIT AIR Conditioning Institute is accepting applications for enrollment in fall term classes starting October 25. Fully GI approved courses in air conditioning, refrigeration, heating, ventilating, sheet metal layout, heat pump engineering. Write for free information. DETROIT AIR CONDITIONING INSTITUTE, Dept. D, 4125 Grand River, Detroit 8, Michigan.

MISCELLANEOUS

NORGE SEALED units remanufactured and exchanged. Immediate delivery from stock. 1 year guarantee. Write for prices and shipping instructions. Complete Norge engineering service. 22 years experience. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 5, Michigan.

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. . . you are planning to
capitalize on the industry's
biggest selling show with
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... SHOW ISSUE
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While you're thinking
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space order is sent today.

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Display Case Sales Planning Specialist

• One of the leading manufacturers of commercial refrigeration equipment offers an unusual opportunity for a young man with a well-grounded knowledge of the display case business.

His capabilities would qualify him to take an important part in product planning and in the development of sales programs.

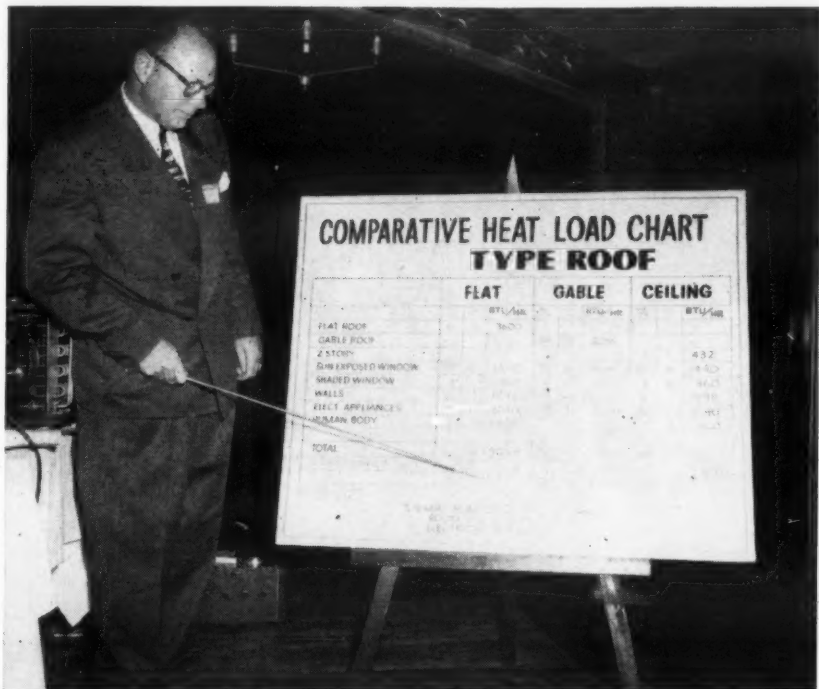
If you have such a background and capabilities, exceptional

future possibilities are open to you with one of the nation's leading organizations in the commercial refrigeration field.

If you are interested, write today giving details of your qualifications, including age, education and experience. All replies will be held in strictest confidence. (Our own people know about this ad.) Box No. 3328, Air Conditioning & Refrigeration News.

WANTED!

Chart Determines Right Window Unit Size



Proper figuring of loads is essential for correct application and thus user satisfaction with window air conditioners, John Jennings, chief engineer of Mitchell Mfg. Co., declared in a talk before the Illinois State RSES. Here he compares the loads in a room under varying conditions.

9 Check-Points Facilitate Figuring of Room's Heat Load, Selecting Proper Unit

By C. Dale Mericle

ROCKFORD, Ill.—"Application of room air conditioners is most important. No one factor has been as foremost in customer dissatisfaction as poor application," asserted John Jennings, chief engineer of Mitchell Mfg. Co. in a discussion before the Illinois State Association of the Refrigeration Service Engineers Society, meeting in its twelfth annual convention here.

"This usually results because the salesman is too anxious to sell the unit and so doesn't apply it properly."

"Each manufacturer gives in actual B.t.u. rating the capacity of the unit. There's no guess-work as to what the unit will do if properly installed," he said, "so we only have to calculate the heat load for the particular room."

"Room units are sold strictly as comfort cooling, not to meet certain specifications such as are usually required in the large central type air conditioning installations. If properly installed the room unit will maintain conditions that are generally satisfactory."

"In calculating the heat load for

a room unit there are a number of considerations, though not as many as with central systems. With room units it is not necessary to go into great detail on wall construction, etc.," Jennings declared.

To show what load calculations should be made for a window air conditioner, and also to indicate possible methods of reducing the load should it prove too great for the unit, Jennings gave typical load factors for 12 by 12 by 10-ft. room.

As shown on the accompanying chart, the cooling load is calculated for the room under (1) a flat roof, (2) gable roof, and (3) ceiling, that is, there is a second floor.

Jennings showed that under the various conditions the load could be as much as 9,088 B.t.u./hr., which is more than can be handled by a ½-ton conditioner rated at 8,876 B.t.u./hr., or as little as 5,820 B.t.u./hr. which could be handled by a ¼-ton unit rated at 5,880 B.t.u./hr. capacity.

The smaller total load was for the same size room where there was a floor above and the sun-exposed win-

COMPARATIVE HEAT LOAD CHART FOR 12 x 12 x 10-FT. ROOM

	Flat Roof—			Gable Roof—			Ceiling—		
	Percent of Capacity	B.t.u./hr.		Percent of Capacity	B.t.u./hr.		Percent of Capacity	B.t.u./hr.	
Flat roof	61	40	3,600	34	23	2,016	8	5	432
Gable roof	25	16	1,440	25	16	1,440	25	16	1,440
Two-story	6	6	360	6	6	360	6	6	360
Sun-exposed window	21	14	1,248	21	14	1,248	21	14	1,248
Shaded window	37	23	2,040	37	23	2,040	37	23	2,040
Walls	7	4	400	7	4	400	7	4	400
Electrical appliances	157	103	9,088	130	86	7,504	104	68	5,920
Human body									
Total									
Awning, sun window (less)									
			-600			-600			-600
Total	145	97	8,488	120	78	6,904	90	60	5,320

*Percent of capacity of ½-ton unit rated at 5,880 B.t.u./hr.

†Percent of capacity of ¼-ton unit rated at 8,876 B.t.u./hr.

dow was protected with an awning. Heat-load created by the flat roof alone totaled 3,600 B.t.u./hr., representing 40% of the capacity of a ½-ton window unit or 61% of a ¼-ton machine.

This roof load drops to 2,016 for a gable roof, and to a mere 432 B.t.u./hr. when there is a second floor above the room in question.

The sun-exposed window, for example, is figured at 1,440, but the addition of an awning will cut 600 B.t.u./hr. off this load factor. Without the awning this window eats up 25% of the capacity of the ½-ton unit, 16% of the ¼-ton.

Cutting these 600 B.t.u./hr. by means of the awning would permit the ¼-ton window air conditioner to handle the room with the flat roof, Jennings pointed out. The total load would be cut from 9,088 to 8,488, which is within the unit's rated capacity of 8,876 B.t.u./hr.

DATA ON FLOOR SPACE ISN'T ENOUGH FOR JOB

"The main point of this discussion on determining the load for a room unit," Jennings emphasized, "is that you just can't say, 'how much floor space?' and then give the answer as to whether the unit will do the job."

In the actual installation of window air conditioners, "generally most all makes are installed in pretty generally the same way, and usually the installation time runs from 40 to 70 minutes."

"There is always danger of the unit toppling out of the window unless it is properly anchored, and each manufacturer makes provision for anchoring the units. There have been times, however, when the installers merely set the unit in the window frame," declared Jennings.

"The greatest source of difficulties resulting from installation practices is the failure to seal properly the cracks and openings around the conditioner."

"Many units stay in the window all winter for ventilation, and believe me, they'll do an 'excellent' job of ventilation in winter if they're not properly sealed," he warned.

MANY FORGET FILTERS

Discussing service problems on window air conditioners, Jennings cautioned that "the most frequent service results from clogged filters. I have seen units returned to the factory because 'they weren't working right' when the trouble was that they needed a filter change."

"I venture to say that 50% of the users don't know that the filter has to be changed when it gets dirty."

Dirt can also be a problem in the condenser and will interfere with satisfactory operation of the unit, he said.

"We tell users and installers to clean and thoroughly check units before the start of each season, and to clean the condenser once each season. We also recommend that our units be thoroughly serviced once each year."

A problem that can be encountered by the serviceman but should more properly be handled at the time of installation, Jennings indicated, is that of low voltage.

"Due to inadequate wiring within the building, there may be a considerable voltage loss at the receptacle where the conditioner is plugged in. The voltage should be checked before installation."

"We have a voltage tester which puts a phantom load on the line equivalent to either a ½-ton or ¼-ton conditioner. The voltmeter in the tester will show whether the service outlet has sufficient voltage."

"There is no way of determining the voltage situation except by putting an actual load on the circuit," Jennings said.

IRON CHECKS LOW VOLTAGE

One serviceman in the audience said a "reasonably satisfactory" check of the voltage could be made by plugging in an electric iron and then checking the voltage. The load, he said (and Jennings agreed) might approximate that of a window conditioner.

Confronted with a low voltage problem in connection with a window unit, another RSES member declared that "we reversed the sequence switch so that the compressor motor started before the fan motor did when the unit was turned on. There was enough voltage to start the compressor motor alone, but not when the fan was running. The fan would start all right after the compressor started."

"This must have been a case where the voltage was just at the critical point," commented Jennings.

Every One in the Industry Should READ...

ONE FOOT IN THE DOOR

THE LAUGH-LEARN-PROFIT BOOK
by GEORGE F. TAUBENECK

... Because Every Laugh Drives Home a SOUND SALES PRINCIPLE!

"This is a funny book," declares George Taubeneck, editor of *Air Conditioning & Refrigeration News*, in his heading for Chapter 1. That's true. You'll laugh! You'll learn, too.

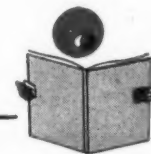
"One Foot in the Door" is the laugh-and-fact-packed story of Specialty Selling. It takes you back through chuckling pages to the birth of the specialty merchandising art under John H. Patterson of N.C.R. fame, and it takes you forward—again with smiles and guffaws—to the shining future.

It clearly delineates the selling principles which years of experience

have set up—and makes them easy to remember by associating these principles with humorous anecdotes. It vigorously points up the job ahead for sales management—tells what, where, why, when, and how.

It pleads eloquently for—and points the way toward—the more efficient distribution system that will be one of the strongest bulwarks of private enterprise.

It does all this so agreeably and fascinatingly that, when you finally finish it, you'll call it the most enjoyable book you've read in a decade.



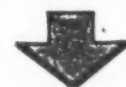
CHAPTER TITLES from "One Foot in the Door"

1. "This Is a Funny Book"
2. The Old Master—and How He Got That Way
3. Making Direct-Mail Advertising Respectable
4. Hair Grows on a Billiard Ball
5. Publicity Isn't Always Free
6. People See Better Than They Hear
7. How to Humanize Your Company
8. Tom Thumb Cartels
9. Finding the Rainbow's Pot-of-Gold
10. There's Always One Best Way to Tell Your Story
11. You Can't Get Off First Base Without a Sales Manual
12. "It Pays for Itself"
13. Ask the Man Who Uses One
14. Everybody Loves a Convention
15. Sales Training Schools Must Be Clever and Entertaining
16. Circuit Riding Becomes a Profession
17. Make It Clear, Make It Simple, Make It Direct
18. Just a Minute, Dear
19. Five Will Get You Ten
20. Mama Can Help, Too
21. Ask the Man Who Does the Work
22. Factory Open House Policy
23. Who Says You Can't Sell Abroad?
24. "Tell All" Promotion Rings the Bell

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'49 Locker Upswing Termed Healthy--

(Concluded from Page 1, Column 2) ago, bringing an average of \$122 more revenue to each of the 10,984 plants, a new business gain of about \$1,300,000 during the past year. This figure is large, but it is only a drop in the bucket compared to the increase in revenue per plant which was achieved through new and increased business stimulated by the locker operator, who began a year ago to quit taking customers for granted and who went to work and did a real selling job.

"We still have our 'bad' plants. . . Every industry has its weaklings and misfits. In every community you will find 'also-rans'."

TURNOVER EVERY 4 YEARS

"In the retail food and meat business, with which I have had a 25-year acquaintanceship, one food market in every four goes out of business every year. There is a complete theoretical turnover of the entire industry every four years."

"Nobody pays any particular attention to it. Every Sunday in the St. Louis, Chicago, Minneapolis, and other metropolitan papers, you'll find columns of markets for sale. Nobody asserts that the retail food business is a flash in the pan."

"Yet, let one locker plant go sour, let another locker man grow old and want to sell, and a few locker plants sell out or go out of business, and the calamity howlers are willing to write off the locker industry as a war-time flash in the pan."

"The truth is," Hoppe asserted, "that no industry in the entire history of American business has come as fast or done as well as has the locker industry. No other industry on the American scene has multiplied itself at the ratio of a 10% growth every year as has the frozen food locker industry."

These statements by Hoppe were more or less introductory to the main topic of the talk, which was titled "Why 612,000 New Families Rented Lockers in 12 Months."

SAVINGS MOST IMPORTANT

Visiting 612 women, one for every thousand new locker renters, interviewers for *Locker Management* at-

tempted to learn why they had decided to rent a locker.

"There were about 612 ways of saying the same thing," Hoppe reported. "Mrs. Jones and most of her 611 sisters under the sun had rented a locker primarily for one reason—to cut the cost of living. There were some exceptions. The actual results here are as follows:

78%—"To cut the cost of living."
11%—"More convenient than home killing and/or canning."

9%—"To take care of game and/or fish."

5%—"Locker foods are fresher, tastier, more healthful."

2%—"Other reasons."

"How did these women come to have these pre-conceived ideas as to what they expected in a locker plant? We fished them out on this and we found the following:

49%—"Heard about it from other women who rented lockers."

23%—"Had lockers before, gave them up, and knew from experience that locker living costs less."

11%—"Had to have freezer of some kind. Necessity."

4%—"Influenced through publicity or advertising."

13%—"Other reasons—no more than 1%."

Locker operators were urged by Hoppe to merchandise better, carry a complete line of fish, frozen foods, ice cream, desserts, etc.

MORE RETAIL SELLING

"The big point is that you should not only have a cooler full of foods, but you should have a retail counter in your locker plant. In the retail meat and food business, when a store has 200 regular customers, his operations are considered outstanding."

"The average locker plant has about 400 regular patrons, and too many of them let them come and go without trying to serve them properly and to make real money by doing it."

"I personally know hundreds of locker men who have installed a retail counter. Not a single one of them ever regretted doing so. Everyone I've talked to has made real 'plus profits' from its installation and

they've had a better, sounder locker plant as a result."

"People come in and buy retail and get acquainted with the locker plant and its personnel and become locker renters as a result. One Southern Ohio locker plant owner put in a 12-ft. case and kept careful records. After paying for all expenses, including extra personnel, he netted, over a nine-month period, an average of \$29 more net profit per week, and got this—he rented 17 lockers as a result of the new contacts he made."

Hoppe then restated the six steps he considers "vital if you want to build your locker business:

"1. Assign somebody—preferably yourself—to go through one or two banks of lockers every day. Check what folks are low on and call timely buys to the attention of the locker renter. . . .

"2. Give folks variety. . . .

"3. Eat out of your own locker . . . but be sure that the food is six months old. . . .

"4. Offer a deluxe service. . . .

"5. Take off one day to look around" at other plants.

Cheyenne Locker Plant Has Wild Game Dept.

CHEYENNE, Wyo.—Bell Packing & Provision Co., locker plant at 421 Rollins Ave., has completed installation of a separate department for the complete processing of wild game, including skinning, chilling, cutting, and wrapping ready for lockers.

Additional frozen food lockers for rental purposes also have been added, and modern new equipment assures the most sanitary conditions.

They'll Entertain at All-Industry Show



This is half of the 16-girl chorus line which will form part of the All-Star Revue which will be the main entertainment feature at the All-Industry Refrigeration & Air Conditioning Exposition. The All-Star Revue will be given on the opening night of the Exposition, Nov. 14, and will be open without charge to all having a registration badge.

Lincoln Air Cooling, Service Classes Begin

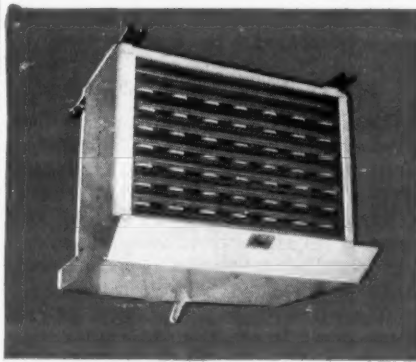
LINCOLN, Neb.—Adult trade and industrial classes covering air conditioning, refrigeration service, blueprint reading, mechanical drafting, and trade mathematics, were inaugurated in October by the Vocational Educational division of the Lincoln Public Schools.

Eligible for the courses are workers in the refrigeration trade who

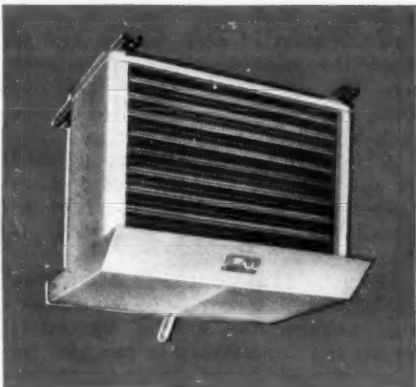
seek supplemental training, and veterans who are taking training on the job.

There is no tuition charged qualified residents of the Lincoln school district. Fees charged cover costs of supplies and books. Classes meet evenings twice a week at Lincoln Central high school and in various Lincoln industrial plants.

You really need QUALITY for LOW TEMPERATURE



BUSH ELECTRIC DEFROST UNIT COOLER is simple to install, convenient to service and includes efficient, built-in electrical defrosting equipment.



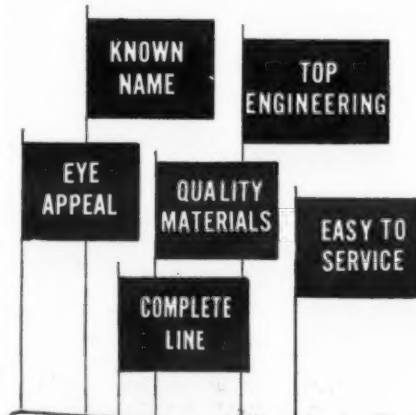
BUSH WATER DEFROST UNIT COOLER defrosts thoroughly, conveniently and inexpensively with ordinary tap water in less than five minutes.



BUSH HEAVY DUTY COOLER for low temperature storage. Capacities 24,000 - 90,000 BTU/HR at 10° TD below 32°.

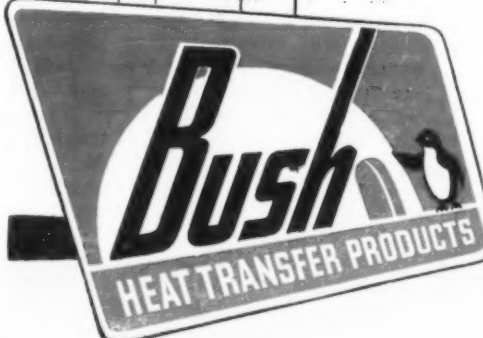
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Bush Heat Transfer Products enjoy a wide-spread preference among refrigeration and air conditioning engineers, installation and maintenance men. These men know from experience that Bush Products give long, trouble-free service . . . greater customer satisfaction. Look for the Bush Trade Mark on all the heat transfer products you buy.



BUSH HEAT TRANSFER PRODUCTS are expertly designed and engineered . . . fabricated of top quality materials to rigid specifications . . . carefully tested and accurately rated. Result: easier selling, faster installation, less service . . . more PROFIT. All this adds up to customer satisfaction . . .

and more business for you. Get acquainted with the BUSH Factory Representative in your territory. He is an expert refrigeration and air conditioning engineer . . . a good man to know. He'll be glad to consult with you regarding the plans and specifications on your next important job.



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See the entire BUSH LINE at BOOTH 221-227

here's the meter we've been looking for. Send for a sample. I want to see how that jam-proof feature works.

ROBCO Commercial COLLECTOMETER

for time payment selling of COMMERCIAL EQUIPMENT

JAM-PROOF Special ROBCO construction does not allow second coin to enter chute until first is cleared. Eliminates possibility of jams, troublesome emergency service calls.

SIMPLE TIME SETTING If a change of the daily charge is desired, the only tool needed is a screw driver. No parts to store, anyone can do it.

STEADY, DEPENDABLE OPERATION The ROBCO Meter has been tested exhaustively under the most severe operating conditions. Fully guaranteed for one year.

TAMPER-PROOF The ROBCO meter is constructed with two separate compartments. Each with a different lock. One contains all the mechanism; coin compartment will hold up to \$160 in quarters. Beautifully finished in hammertone grey to blend with any equipment.

Wm. J. Doherty, Inc. 70 East 45th St. New York
Gentlemen:
☐ We're interested in further information.
☐ Send us a sample ROBCO Commercial COLLECTOMETER @ \$15.95 C.O.D.

Name
Company
Address
City State

\$15.95

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SEND FOR YOUR SAMPLE TODAY!